



The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

An Illustrated Record of Mining, Metallurgical, Railway, Financial, Industrial, And Engineering Progress.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper and for Transmission Abroad.]

No. 3179.—VOL. LXVI.

London, Saturday, July 25, 1896.

PRICE..... SIXPENCE.
BY POST, 2/- PER ANNUM.

A. CORNFORTH AND CO.,
STOCK BROKERS AND MINING SHARE DEALERS
15. NEW BROAD STREET, LONDON, E.C.

BUSINESS IN ALL CLASSES OF STOCKS AND SHARES
SPECIAL BUSINESS in KAFFIR, WEST AUSTRALIAN
and all Mining Shares. Prompt Delivery made a special feature.
Mining Circular free on application.

BANKERS: CITY BANK.—Telegraphic Address: "Atheinley, London."

ASSAY OFFICE AND LABORATORY.

B. KITTO'S,
80 and 81, ST. SWITHIN'S LANE, LONDON, E.C.

ASSAYS MADE OF ALL ORES. ANALYSES.
ASSAYING TAUGHT.

HERBERT T. MARKS, M.I.M.E.,
Consulting Mining and Metallurgical Engineer.
(Late) Mining Engineer and Assayer to the Transvaal Government.
Surveys, Plans, Assays, Reports on Minerals. Properties Executed.
Erection of Mining and Metallurgical Machinery Undertaken.
Indicates Represented. Eleven Years' Practical Experience.

HIGHEST REFERENCERS.
May be consulted by Shareholders and Intending Investors in South African
Mining Properties.

New Broad Street House, London, E.C., and
17 and 18, Goodman's Buildings, Johannesburg.
Telegraphic Address: "Topazite," London. "Maserite," Johannesburg.

J. A. JONES, Mining Engineer,
(M.Inst.M.M., M.N.Eng.Inst.M.M.E.)
GIJON (ASTURIAS), SPAIN.

PUMPING MACHINERY.

See Illustrated Advertisement Every Third Week.

HATHORN, DAVEY and CO., LEEDS.

**CANNOCK CHASE COAL BY CANAL
AND RAILWAY.**

THE COMPANY SEND COAL BY RAILWAY in Trucks to all
Stations, and load Canal Boats at their extensive Wharves on the
Anglesey Branch of the Birmingham Canal, adjoining the Colliery;
and also at Huddersfield Basin, Cannock. For Prices, apply to

J. NEWLAND BROWN,
WARWICK CHAMBERS, CORPORATION STREET,
BIRMINGHAM.

Retail Department: COLMORE CHAMBERS, 1, NEWHALL ST., Birmingham.
London Office: 9 and 10, Southampton Street, High Holborn, W.C.

GOLD ASSAYING, &c.
GENTLEMEN having only a short time at their disposal can
obtain SPECIAL INSTRUCTION in ASSAYING ORES of all
kinds.

For Prospectives, &c., apply to

MARTIN and PETHYBRIDGE,
ASSAYERS, &c., LABORATORY AND TESTING WORKS,
183, KING'S ROAD, CHELSEA, S.W.

Complete Analysis of Constituents of any Ore from £1 1s. to £2 2s.
GOLD ASSAYS CONDUCTED WITH CHECK, 7s. 6d. PER SAMPLE.
GOLD ORES PRACTICALLY TESTED BY STAMP BATTERY
And other processes.

BARTON, SONS, & HEWER,
Mining Engineers, Metallurgists, and General Accountants.
14, CASTLEREAGH STREET, SYDNEY, N.S.W., & COOLGARDIE, W.A.

A kinds of Mining Engineering undertaken and carried out under
the supervision of one of the Firm.
Mines and Mining Properties in all Australia visited, inspected,
and reported upon.

Machinery purchased, inspected, or advised upon.
The Firm will act as Consulting and Advising Engineers in all
matters connected with the Working or Treatment of Ores;
will undertake the Management of Mines, the Erection of
Machinery, either during development or otherwise, or will
take the Legal Management either as Agents, or under a
Board of Directors.

Assays or Chemical Analysis made or Practical Results obtained
by our Metallurgical Staff.

Mining Books of Account opened, kept, and audited; Estates
liquidated, and all the Business of General Accountants and
Agents conducted.

The Financial and General Management will be under the supervision of Mr. RUSSEL BARTON, for 16 years Chairman and
Visiting Director of the Great Cobar and Nymagee Copper and
other Mines in N.S.W.

The Engineering and Metallurgical Department will be conducted
by Mr. W. W. BARTON, Mining Engineer, Graduate of Freiberg,
and Engineer and Manager for many years in New South Wales.
The Survey and Drafting Department will be supervised by
Mr. A. J. C. BARTON, for nine years in the Survey Department
of New South Wales.

The Accountant's Department will be under the personal conduct of
Mr. G. HEWER, Chartered Accountant.

References in London—Moors, DANGAR, GRANT, and Co., Fenchurch House,
Fenchurch Street, E.C.; GEORGE HARDIE, Esq., 63, New Broad
Street, E.C.

Telegraphic Address: "Sydney, Lass." Coober Pedy, "Pickwick." Code—Bedford McNeill's.

J. GRANT MACLEAN,
STOCK AND SHARE BROKER, STIRLING, N.B.
TELEGRAPHIC ADDRESS—"BONDING, STIRLING."

Clients supplied gratis with Price Lists and Prospectuses explaining
the whole system of dealing in Shares.

REFERENCES ON APPLICATION

Refers to his Share Market List on Page 935 of to-day's Journal.

GEORGE GREGORY AND CO.,
STOCK AND SHARE DEALERS,
LONDON, MANCHESTER, LIVERPOOL, BRIGHTON, HASTINGS.

Every Investor and Speculator, before operating, should read
Gregory's "Hints to Speculators." 420 pages. Ninth Edition,
Illustrated. Gratis and post free on application to

GEORGE GREGORY & CO.,
STOCK AND SHARE DEALERS,
HEAD OFFICES:

NOS. 3 AND 4, TOKENHOUSE BUILDINGS, LOTHBURY, BANK OF
ENGLAND, LONDON, E.C., and BRANCHES.

ALBERT H. HALDER,
Consulting Engineer, F.R. B.A., Memb. Fed. Inst. M.E.,
Memb. Am. Inst. M.E., Memb. Austrian Inst. C.E., and Archts.

GENERAL MANAGER,
LEICHDAL (Rhodesia) DEV. CO., LTD.

REPRESENTATIVE CIVIL ENG. EXP'L. SYND.
5, COPTHALL BUILDINGS, LONDON, E.C.

Telegraphic Address: "HALDER," Buluwayo
Postal Address: P.O. Box 126, Buluwayo.

MINING BUSINESS MATTERS:
A.B.C. Code, Fourth Edition: Bedford McNeill; Moreing and Neal.

OFFICES
JOHANNESBURG, LONDON, and PARIS.

**COLORADO MINING AND OTHER
INVESTMENTS.**

THOMAS TONGE, DENVER, COLORADO.
SPECIALITIES—Gold Properties; Leasing and Development
Syndicates.

CABLE: "TONGE, DENVER." Code, "A. B. C." Fourth Edition.

JAMES H. HACKET, Mining Engineer,
IS PREPARED to INSPECT and REPORT on MINING
PROPERTIES in WESTERN AUSTRALIA.

Address: J. H. HACKET,
Telegraph Office, Kurnelpie, Western Australia.

**BRITISH GUIANA AND THE NEW GOLD
INDUSTRY.**

BRITISH GUIANA BANK.

Incorporated by Ordinance of the Governor and Court of Policy of British
Guiana 11th November, 1836.

Confirmed by the Queen in Council, 5th October, 1838.

SUBSCRIBED CAPITAL..... \$1,400,000 | PAID-UP..... \$926,520

RESERVE FUND, \$288,000

CHAIRMAN: Mr. HUGH SPROSTON, JUN.

HEAD OFFICE: GEORGETOWN, DEMERARA.

MANAGER: GEO. W. LANE. | ACCOUNTANT: F. A. CONYERS JUN.

BRANCH OFFICE: NEW AMSTERDAM, BERBICE,

London..... Smith, Payne, and Smiths,
New York..... Maitland, Phelps, and Co.

British North America: Bank of British North America.

Newfoundland..... Bank of Nova Scotia, St. John's.

Current Accounts opened in accordance with the usual practice of Bankers.

Money Received on Deposit or Interest. Bills of Exchange negotiated.

Letters of Credit issued by London Agents on Demerara free of charge.

Raw Gold Purchased or Shipped on Consignment.

Bills Collected and every other description of Banking Business transacted.

THE BANK OF AFRICA (LIMITED).

ESTABLISHED 1878.

Head Office, 113, Cannon Street, London.

SUBSCRIBED CAPITAL..... \$1,575,000

Paid-up, £525,000; Reserve Fund, £287,500

General Manager—JAMES SIMPSON, Cape Town.

BRANCHES

Aliwal North, Cape Town, Cradock, East London, Grahamstown, Kimberley

King Williams Town, Oudtshoorn, Paarl, Port Elizabeth, Queen's Town.

Bethlehem, Bloemfontein, Fauresmith, Harrismith, Ladysmith, Winburg

Durban, Newcastle, Pietermaritzburg, Barberton, Johannesburg, Klerksdorp,

Pretoria, Vryheid, Boksburg, Delagoa Bay, Bulawayo, Salisbury.

The Bank issues drafts, makes telegraphic remittances, buys and collects bills

and conducts all kinds of banking business.

Deposits received on terms which may be ascertained on application.

H. G. DAVIS, Secretary.

ESTABLISHED 1851

BIRKBECK BANK

SOUTHAMPTON BUILDINGS, CHANCERY LANE, LONDON.

TWO-AND-A-HALF per CENT. INTEREST allowed on DEPOSITS repayable

on Demand.

TWO per CENT. on CURRENT ACCOUNTS on the minimum monthly

balance, when not drawn below £100.

SAVINGS DEPARTMENT.

For the encouragement of Thrift, the Bank receives small sums on Deposit

and allows Interest monthly on each completed £1.

The Birkbeck Almanack, with full particulars, post free.

FRANCIS RAVENSCROFT, Manager.

For Index to Advertisements see Page 942.

For Literary Contents see Page 956.

R. C. CAMPBELL-JOHNSTON.
(OF SWANSEA, INDIA, AND THE STATES).

FOUR YEARS IN BRITISH COLUMBIA.

MINING ENGINEER AND METALLURGIST
POSTAL ADDRESS: BOX 40, VANCOUVER, B.C.
CABLE ADDRESS: CAMPBELL-JOHNSON, VANCOUVER.

A.B.C. CODE.

MINES EXAMINED AND REPORTED ON, DEVELOPED
AND MANAGED.

Furnaces, Mills, and Mining Plants Planned and Erected.

ORES BOUGHT AND SOLD.

CHARLETON AND CO.

A. G. CHARLETON, A.R.S.M., F. W. GREY, A.R.S.M.,
MINING ENGINEERS AND MINE MANAGERS,
undertake Inspections and Reports and the Design of Mining and
Milling Plant of all kinds.

Dashwood House, 9, New Broad Street, E.C.

Cable Address: "Ingressio." Bedford McNeill's and Broomhill's Codes.

ASSAY OFFICE AND ORE TESTING WORKS.

JOHN D. WARREN,

(Late HERBERT R EDMANDS)

BERKLEY GROVE WORKS,
BERKLEY ROAD, CHALK FARM, N.W.
Gold and Silver Assays, &c. Cyanide, Amalgamation,
Chlorination, or Concentration Tests, including Assays, £1 each.
Assays made of all Ores.

DONALD CLARK, B.C.E., M.E.,
BAIRNSDALE, VICTORIA.

Director of the North Gippsland School of Mines (which has the
most perfect Gold-testing Machinery in Australia).
REPORTS ON MINES AND MINING PROPERTIES.
Gippsland a Speciality.

L. C. NICKERSON and CO.,
MEMBERS COLORADO SPRINGS MINING STOCK ASSOCIATION.
Do a General Commission Business in
CRIPPLE CREEK MINES;
PROSPECTS AND LISTED MINING STOCKS.

HIGH-GRADE AND DIVIDEND-PAYING STOCKS A SPECIALITY.
Portland, Isabella, Union, Elikton Consolidated, Moon, Anchor, and Anaconda
are selling far below their intrinsic value.
Correspondence solicited. Highest Bank References furnished.
104. Pikes Peak Ave., P.O. Box 491, Colorado Springs, Colo., U.S.A.

E. HENRY DAVIES, F.G.S.,

CONSULTING MINING ENGINEER,
6, GREAT WINCHESTER STREET, LONDON, E.C.

Author of "Machinery for Metalliferous Mines."

Joint Author of "Metalliferous Mines and Mining."

"Earthy and other Minerals and Mining."

Undertakes the INSPECTION and MANAGEMENT of MINES at home and
abroad, and the introduction of approved Properties to Capitalists.
Minerals of all descriptions purchased in large or small quantities.

**PUMPS AND PUMPING
MACHINERY.**

INDEX TO ADVERTISEMENTS.

(THOSE WITHOUT NUMBER OF PAGE DO NOT APPEAR IN THIS ISSUE.)

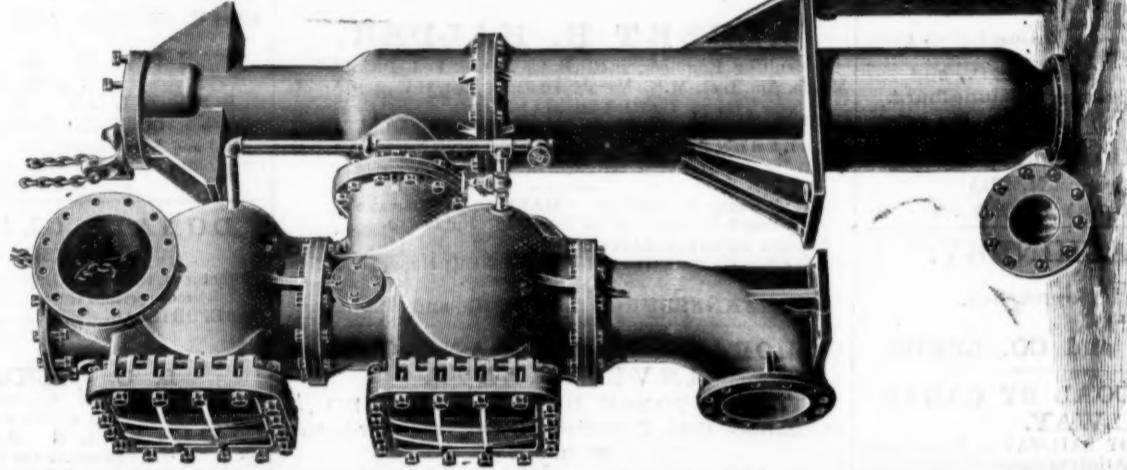
	PAGE		PAGE		PAGE		PAGE		PAGE	
Appleby, Bros.	941	Cotton Powder Co. (Ltd.)	970	Explosives	970	Monger, J. and Co.	970	Merchants and Forwarding Agents	986	PAGE
Austin, J. B.	941	Oraz and Gerlach	969	Publishers	969	Negratti and Sambra	970	Surveying and Mining Instruments	970	986
Australian Gold Recovery Company	941	Davies, Henry	941	Mining Engineers	941	Nickerson and Co.	970	Bankers and Brokers	970	970
Bank of Africa, (Ltd.)	941	Delta Metal Co. (Ltd.)	945	Mining, &c., Instruments	945	Nobel's Explosives Co. (Ltd.)	970	Water Cartridges, &c.	970	970
Barton, Sons, and Hewer	941	Easton, Anderson, and Goolden	970	Rook Drills	970	Parkin	970	Signal Bells	970	970
Bennett, Sons, and Co.	941	Elliman, Sons, and Co.	971	Metal	973	Pass and Son	970	Buyers of Lead Ashes, &c.	970	970
Bowan, W. and Co.	941	Evans, Joseph and Sons	972	Embrocation	972	Phosphor Bronze Co. (Ltd.)	970	Bulls Metal, &c.	970	970
Birkbeck Bank	941	For Sale	972	Pumps	941-943	Piggott and Co.	970	Welded and Riveted Pipes	970	970
Blake and Knowles (Limited)	941	Tavy Iron and Engineering Works (Ltd.)	970	Ireland, James	970	Colliery Ready Reckoner	969			
Bowes-Scott and Western	941	Thomas, E.	970	Karuth, Frank	970	Notes on the Philippine Islands	969			
British Guiana Bank	941	Fontaine Company	970	Louis, Henry	970	A Hand-book of Gold Milling	969			
Brunton and Pearson's Patent Mine Transit	941	Fraser and Chalmers (Ltd.)	970	Nicholas, William	970	The Golden Quartz Reefs of Australia	969			
Bute Works Supply Company (Limited)	941	Frictionless Engine Packing Company	970	Rose, James	970	New Guide to the Iron Trade	969			
Business Cams—	941	Engine Packing, &c.	970	Safford, Frank	970	The Law of Merchandise Marks	969			
Commins, R. E.	941	Rock and Ore Breaker	970	Tacknote	970	Form of License to Explore	969			
Clarkson-Stanfield Concentrator (Ltd.)	941	Shipping Agents	970	Wilkinson, W. F.	970	History of the Holmshush, Redmoor, &c.	969			
Chatterton, George J.	941	Green, G.	970	Railway Passengers Assurance Company	970	Railway Passengers Assurance Company	970			
Davis and Son	941	Gregory, G., and Co.	970	Roberts and Co.	970	Engines and Ore Crushers	970			
Davis and Sons	941	Hackett, James H.	970	Roburite Explosives Co. (Ltd.)	970	Explosives	970			
Fraser and Chalmers (Ltd.)	941	Halden, Albert H.	970	Ropeway Syndicate	970	Aerial Wire Ropeways	970			
Gates Ironworks Co.	941	Hansell, Charles and Co.	970	Rowe, W. H.	970	Mining Engineer	970			
Giles and Co.	941	Hansell, F. L.	970	Sales by Auction	970	Victorina Mining Academy, Cianthau	969			
King, Frederick J.	941	Harvey, Julius and Co.	970	Sandycroft Foundry Company	970	Electrical Machinery	967			
Larmuth, Thomas, and Co.	941	Hathorn, David and Co.	970	Schram and Co.	970	Rock Drills and Compressors	970			
Lubrig Coal and Ore Dressing Appliances (Ltd.)	941	Harvey, W. Fellow	970	Seaward, William	970	Share Dealer	970			
Mason, J. H.	941	Holt, Chas. Louis	970	Shipping	970					
Nobel's Explosives Co. (Ltd.)	941	Holman Bros.	970	Donald Currie and Co.	970					
Pool, J. and F.	941	Howes, S.	970	Union Steamship Company	970					
Robey and Co. (Ltd.)	941	Hughes, T. Vaughan	970	Smith, Thomas and Sons	970					
Schram and Co.	941	Humboldt Engineering Works Co.	970	Stanley, W. F.	970					
Sheppard and Sons (Ltd.)	941	Instruction in Assaying	970	Stewart and Clydesdale	970					
United Asbestos Co. (Ltd.)	941	Ingersoll-Sergeant Drill Co. of America, Rock Drills and Compressors	942	Tangye Limited	970					
Unity Fuze	941	Jones, J. A.	970	To Let	970					
Victorian Gold Fields (Limited)	941	Kitto, B.	970	Tonge, Thomas	970					
Van Wagenen	941	Krupp Grusonwerk	970	Tuck and Co. (Ltd.)	970					
Carburne Mining School	941	Lambert's Wharfage Company	970	United Asbestos Co. (Ltd.)	970					
Campbell Johnston, R. C.	941	Larmuth, T., and Co.	970	Vivian's Boring Co. (Ltd.)	970					
Cannock Chase Colliery Company	941	L. LePersonne	970	Walker Brothers	970					
Cassel Gold Extracting Co. (Ltd.)	941	Maclean, J. Grant	970	Wanted	970					
Champion Rock Borer Co.	941	Marks, H. T.	970	Warren, John D.	970					
Charleton, A. G.	941	Marden, H. R.	970	Weston, Wm.	970					
Clark, Donald	941	Martin and Pethybridge	970	Whitehead, Morris and Co.	970					
Clarkson-Stanfield Concentrator (Ltd.)	941	McNeil's Code	970	Wiggin and Co. (Ltd.)	970					
Companies and Legal Announcements	941	Merton and Co.	970	Williams, Captain	970					
Clayton and Shuttleworth	941	Middleton, Richard J.	970							
Cornforth and Co.	941									

FRASER and CHALMERS,
LIMITED.

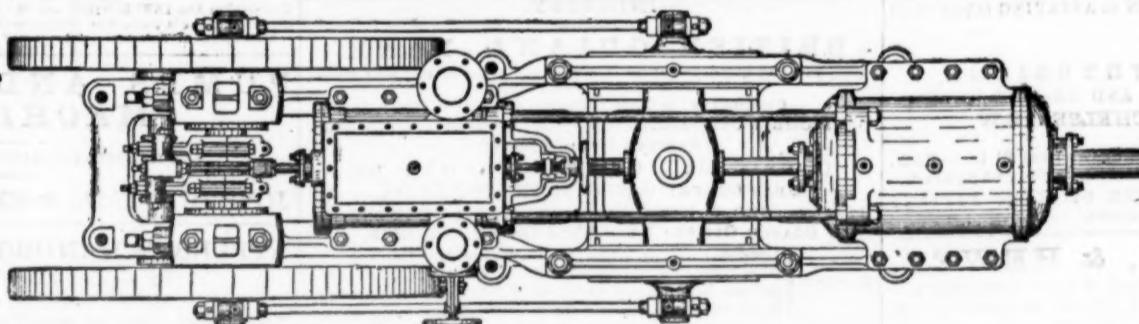
MAKERS OF ALL CLASSES OF IMPROVED

Mining, Milling, Smelting, Concentration,
and Leaching Machinery.

HIGH-CLASS
CORLISS STEAM
ENGINES with effi-
ciency guaranteed.
BOILERS, PUMPS,
ROCK DRILLS,
DIAMOND DRILLS,
COMPRESSORS,
PERFORATED
METAL, FINE
CRUSHING ROLLS,
RIEDLER PUMPS
AND COMPRESSORS,
SCHWEIKER
SUPERHEATER,
PELTON & TURBINE
WATER WHEELS,
HOISTING
ENGINES, of best
modern design,
DIRECT-ACTING OR
GEARED, FLAT
OR ROUND ROPE
DRUMS,
COMPOUND
ENGINES,
of Special Design
for
HIGH DUTY.

CORNISH PUMPS
and RIEDLER PUMPS for any DEPTH.

Office:
43, Threadneedle Street,
LONDON, E.C.
Works:
ERITH, KENT.
CHICAGO, ILL., U.S.A.

INGERSOLL-SERGEANT
PISTON INLET COLD-AIR COMPRESSORS.

A HIGH DUTY AIR COMPRESSOR. STEAM OR BELT ACTUATED.
DUPLEX CORLISS AIR COMPRESSORS. DIAMOND and PROSPECTING DRILLS.

Write for Catalogue.

THE INGERSOLL-SERGEANT DRILL CO., 114A, QUEEN VICTORIA ST., LONDON, E.C.

W. F. STANLEY

Mathematical Instrument Manufacturer

To H.M. Government, Council of India, Science and
Art Department, Admiralty, &c.MINING, SURVEYING AND DRAWING
INSTRUMENTSOF EVERY DESCRIPTION, OF THE HIGHEST QUALITY
AND FINISH, AT THE MOST MODERATE PRICES.

Price Lists post free.

Address—Great Turnstile, Holborn, London, W.C.

GOLD MEDAL, Inventions Exhibition, 1885

Mining 1890

LIVERPOOL JOURNAL OF COMMERCE

Is the best FINANCIAL and COMMERCIAL PAPER

in the Provinces.

Is now Enlarged to Eight Pages.

Contains more Commercial and Shipping News than any other

Morning Paper.

Proprietor, CHARLES BIRCHALL, 32, Castle Street, Liverpool

LONDON OFFICE.—38, GRACECHURCH STREET.

THE WESTERN DAILY MERCURY.

The Paper for News.

The Paper for Advertisements.

The Paper for the People.

THE WESTERN WEEKLY MERCURY

The Paper for the Household.

These Journals have an enormous circulation throughout Devon

and Cornwall, and are conveyed by specially chartered trains.

OFFICES: PLYMOUTH,

THE INDIAN and EASTERN ENGINEER.

AN ILLUSTRATED WEEKLY JOURNAL

FOR

ENGINEERS IN INDIA AND THE EAST.

The INDIAN AND EASTERN ENGINEER contains the latest and most
authentic information on all subjects connected with Engineering enterprise
in India and the East.Correspondence invited on any subject which may be of interest to the pro-
fession.RATE OF SUBSCRIPTION (payable in advance, including a copy of the
INDIAN AND EASTERN ENGINEER'S DIARY, and postage):—

Indian Rates.

English Rates.

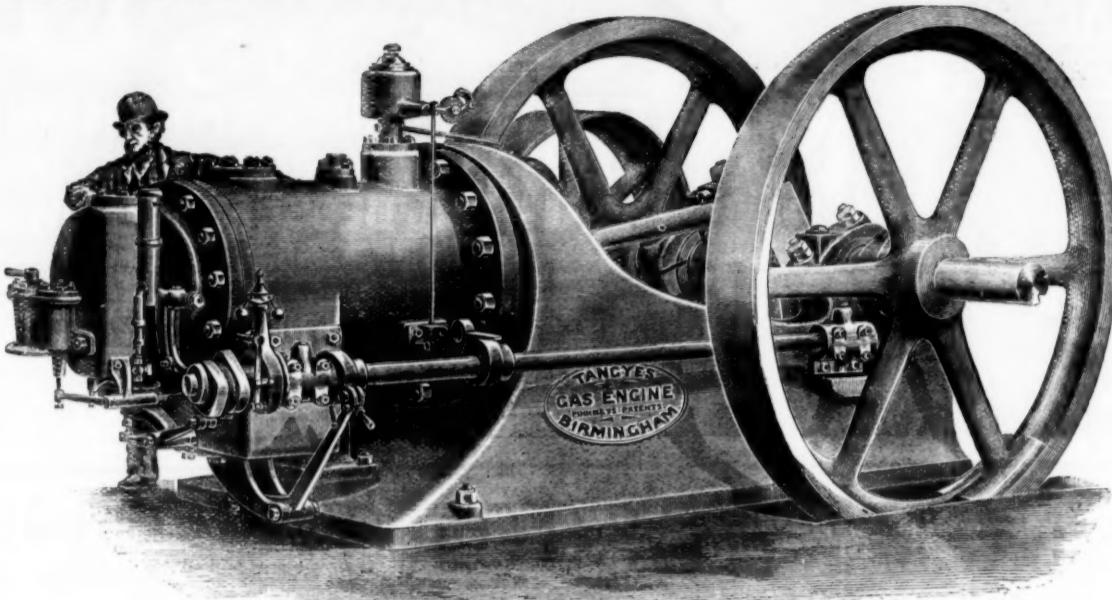
Yearly Rs. 20 | Yearly 40s.

Published at 137, Canning Street, Calcutta.
London Office: 28, Victoria Street, Westminster, S.W.

TANGYES' GAS ENGINE.

"OTTO" PRINCIPLE. PINKNEY'S PATENTS.

Messrs. TANGYE have laid down special plant and tools for the manufacture of these Engines, and are able by their system of MULTIPLE MANUFACTURE and of WORKING TO GAUGE to turn them out in the best possible style.



The 35 H.P. (Nom.) Engine—giving 86 ACTUAL HORSE-POWER, and indicating 100 H.P.

Single Engines from $\frac{1}{2}$ to 146 Actual H.P. (=170 Ind. H.P.) and Coupled Engines from 86 to 292 Actual H.P. (=340 Ind. H.P.)

Apply for Illustrated and Descriptive Catalogue of Gas Engines to

TANGYES LIMITED, BIRMINGHAM.

ALSO AT

LONDON, NEWCASTLE, MANCHESTER, GLASGOW, CARDIFF,
SYDNEY, JOHANNESBURG, BILBAO, and ROTTERDAM.

Telegrams—"TANGYES, BIRMINGHAM.

No. 84 c.

JOSEPH EVANS & SONS,

Telegrams:

"EVANS," Wolverhampton.

NAT. TELEPHONE, NO. 7039. TRADE



Write for

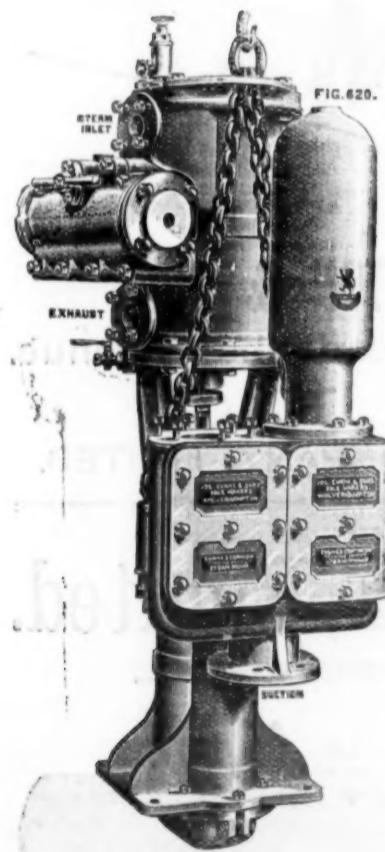
"MINING PUMP" Catalogue.

MARK.

FOR MINES.

EXTRANEous GEAR.

"EVANS and TONKIN'S" Patent "CORNISH" SINKING PUMPS have been used on all the recent modern sinking operations of importance, including North's Navigation Collieries, the Blackwall Tunnel, the Barry Dock Extension, the Griff Colliery Sinkings, the Coppice Colliery, the Fishley Colliery, the Moss Hall Colliery, the North Walbottle Colliery, the West Hallam Colliery, and other large Sinkings, also North Wales, Rand, West African, West Australian, Victorian, South American Gold Mines, &c., &c.



London Office
16, UNION COURT, OLD BROAD ST.,
E.C.

DEPOTS:
NEWCASTLE-ON-TYNE,
GLASGOW, WAKEFIELD,
MANCHESTER,
CARDIFF, and BELFAST.
JOHANNESBURG.
Etc.



The "CORNISH" STEAM PUMP.
The "DUPLEX" STEAM PUMP.
The "RAM" STEAM PUMP.
The "RELIABLE" STEAM PUMP.

DONKEY PUMPS.
HORSE PUMPS,
POWER PUMPS,
AIR COMPRESSORS,
&c.



WORKS,
WOLVERHAMPTON.

GRIFF" PATTERN
"CORNISH"
SINKING PUMP.

CULWELL

WALKERS' PATENT INDESTRUCTIBLE VENTILATING FANS FOR MINES, TUNNELS, &c.
CONSTRUCTORS OF THE VENTILATING MACHINERY AT THE SEVERN AND MERSEY TUNNELS.

ANTI-VIBRATION SHUTTER
Applicable to all enclosed Fans

WALKER & BROTHERS

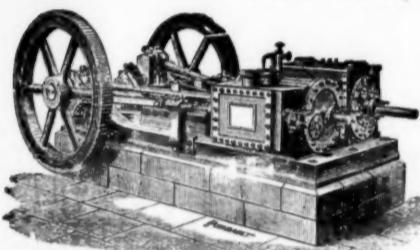
WALKER & BROTHERS PATENT AIR COMPRESSING ENGINES GAS COMPRESSING ENGINES BESSEMER BLOWING ENGINES

upwards of 400 of the above now AT WORK indicating in the aggregate 150,000 Horse-Power

Fisher & Walkers' Patent Friction Clutch & Underground Haulage Machinery
THIS GEARING IS NOW EXTENSIVELY IN USE FOR HAULAGE PURPOSES. * * *
The objects attained are SIMPLICITY, ENDURANCE OF THE MACHINERY AND ROPES with a MINIMUM EXPENDITURE OF POWER.

AIR COMPRESSORS

With Compound Air and Steam Cylinders,
Fitted with SCHRAM'S Inlet and Outlet Valves giving the greatest efficiency.



SCHRAM'S IMPROVED Rock Boring Machines.

Supplied to the Indian, Colonial, and other Governments.
2500 IN USE in all PARTS of the WORLD.

DIAMOND PROSPECTING DRILLS.

"OPTIMUS" COMPOUND ROCK DRILL.

(P. J. OGLE'S PATENT.)

Consumes 40 per cent. less Compressed Air than any other Drill at the same time giving the most effectual results.

ESTIMATES AND FULL PARTICULARS ON APPLICATION.

RICHARD SCHRAM & CO., 17a, Great George Street, Westminster, S.W.

TELEGRAMS. "SCHRAM, LONDON," A1, A.B.C. and The Engineering Telegraph Codes Used.

GEORGE GREEN, FOUNDRY, ABERYSTWYTH.

SILVER MEDALS AWARDED AT THE ROYAL CORNWALL POLYTECHNIC, 1872 & 1876; GOLD MEDAL AWARDED AT THE GREAT INTERNATIONAL MINING EXHIBITION, CRYSTAL PALACE, 1890.

ONLY AWARDS GIVEN FOR CONCENTRATION PLANTS.

GREEN'S LATEST IMPROVED Self-Acting or Automatic Ore Dressing Machinery.

A Special Plant, on a reduced scale, has been erected at the Works by which samples of METALLIC ORES up to Five Tons may be treated, and the commercial value determined. In this way the most suitable arrangement of Plant is ascertained, a considerable advantage to intending Purchasers of Crushing and Concentrating Plant.

GOLD STAMP AND OTHER MILLS.

Estimates, Catalogues, and Full Particulars on Application.

Telegrams—Green, Foundry, Aberystwyth.

For PURE ALUMINIUM

98 to 99 $\frac{1}{2}$ per cent. (98 per cent. minimum guaranteed) in

INGOTS, STICKS, & ROLLING SLABS;

ALSO FOR

SHEETS, &c., AND
FERRO-ALUMINIUM.

ALUMINIUM.

APPLY TO

HENRY R. MERTON & CO.,

2, Metal Exchange Buildings, Leadenhall Avenue.

LONDON, E.C.

AGENTS FOR THE BRITISH ALUMINIUM COMPANY, LIMITED.

A. & J. STEWART and CLYDESDALE, Limited.

Glasgow, Coatbridge, and Mossend.

WROUGHT IRON WELDED TUBES and FITTINGS for GAS, WATER, and STEAM.

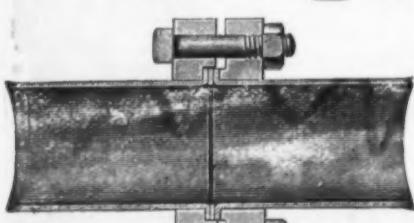
Light Lap-welded Wrought-iron and Steel Tubes

(SPECIALLY ADAPTED FOR MINES).

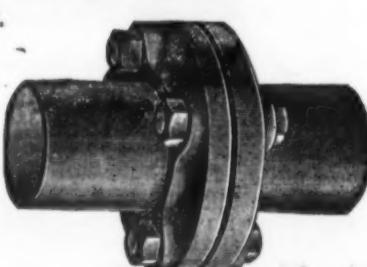
With Patent Flanged Joints (as illustrated) for the Conveyance of Water, Steam, and Air, at High and Low Pressures.

LAP-WELDED IRON AND STEEL BOILER TUBES
FOR LOCOMOTIVE, MARINE, AND OTHER MULTITUBULAR BOILERS.

STEEL & IRON PLATES FOR BOILERS, BRIDGES, &c.



SECTION OF PATENT FLANGED JOINT



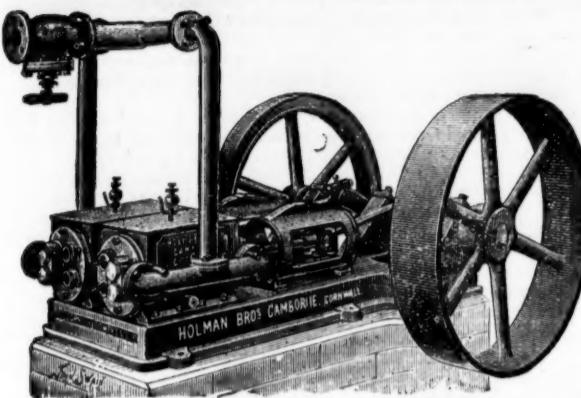
PLAN OF PATENT FLANGED JOINT.

Head Offices: 41, OSWALD STREET, GLASGOW.

HOLMAN Bros., Camborne, Cornwall.

ESTABLISHED 1839.

**Patentees and Sole Makers of
"THE CORNISH" ROCK DRILL and "THE CORNISH" COMPRESSOR.**



RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour

At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **5 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES**, and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until hoisting to the Shaft brought down from surface.

Estimates for ROCK BORING PLANT and GENERAL MINING MACHINERY on Application.

London Offices: 7 and 9, LEADENHALL BUILDINGS, E.C.

FIRST
SILVER MEDAL,
Highest Award,
Mining Institute
Contest, 1881.

Three Makers
represented.

AWARDED SILVER MEDAL INTERNATIONAL
INVENTIONS EXHIBITION, 1885.

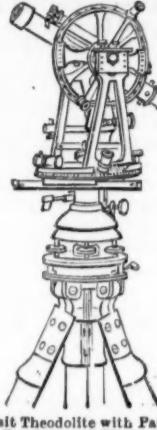
FIRST
SILVER MEDAL
Highest Award,
Royal Cornwall
Polytechnic
Jubilee Exhibition
Contest, 1882.

Five Makers
represented.

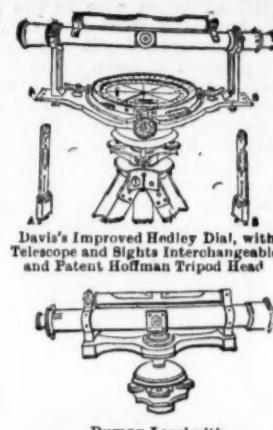


JOHN DAVIS AND SON.

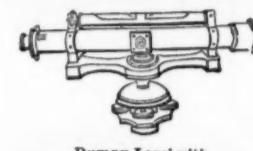
ALL SAINTS WORKS, DERBY;
118, NEWGATE STREET, LONDON.



Transit Theodolite with Patent Hoffman Tripod Head, and Trough Compass.



Davis's Improved Hedley Dial, with Telescope and Sights Interchangeable and Patent Hoffman Tripod Head



Dumpy Level with Hoffman Patent Tripod Head.

MINING, SURVEYING, AND ENGINEERING INSTRUMENTS.

THEODOLITES. LEVELS. TACHEOMETERS.

Davis's Improved Hedley Miners' Dials, with HOFFMAN PATENT TRIPOD HEAD; AND ALL DESCRIPTIONS OF MATHEMATICAL AND MINING SURVEYING INSTRUMENTS.

Revised Illustrated Catalogues Free to any Part of the World.
SECTION (A) MATHEMATICAL DEPARTMENT AND SAFETY LAMPS
SECTION (B) ELECTRICAL DEPARTMENT.

Gold Medal Awarded Mining Exhibition, 1890.
A. B. C. CABLE CODE, 4TH EDITION.

Jeffrey Electric Coal Cutter and Drill may be seen at work in the Model Mine, Cardiff Exhibition, Instruments, &c., Stand No. 315.

AWARDS: CRYSTAL PALACE, 1890; TASMANIA, 1891; KIMBERLEY, 1892.

CONCENTRATION.

The Clarkson-Stanfield Ore Reduction Co. (Limited).

In the CLARKSON-STANFIELD process of Concentrating Refractory and Complex Ores no water is required; dust is reduced to a minimum; the loss of Mineral through water-borne Slimes is obviated.

OUTPUT $\frac{1}{2}$ TO 2 TONS PER HOUR, ACCORDING TO SIZE OF MACHINE.
CONCENTRATOR TO BE SEEN IN OPERATION AT THE COMPANY'S ONLY ADDRESS,

6, COLONIAL AVENUE, MINORIES, LONDON, E.

The Machine is superior to Sieves for Sizing Homogeneous Substances, such as Emery, Sand, and Powders, and may be used to great advantage in the preparation of Ochre.

N.B.—The owners of the Carndochan Mine, near Bala, North Wales, will, by arrangement, show their CLARKSON-STANFIELD plant working on a Refractory Low Grade Gold Ore.

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

- 14906 Percival Pinckney, 15, Middle Street, Southsea, Portsmouth.—Improvements in connection with steam boilers.
14925 James Noah Paxman, William Paxman, and James Court House Peach, 73, Chancery Lane, London.—An improved expansion and reversing gear for steam and other fluid pressure engines.
14933 Francis Lane Merritt, 22, Southampton Buildings, Chancery Lane, London.—Improvements in internal combustion engines.
15045 Herbert Charles Baker, 45, Southampton Buildings, Chancery Lane, London.—Improvements in gas or vapour engines.
15113 William Sheldock, 11, Southampton Buildings, Chancery Lane, London.—An improved method of and apparatus for supplying purified feed water to steam boilers.
15126 Alfred George Melhuish, 208, Chancery Lane, Peckham, London.—Improved method of and means for cooling the cylinders of gas and oil vapour engines.
15190 Oil Shot, 3, Jacks'n Street, Chester Road, Sunderland.—Short's injector powders or liquids in steam boilers.
15275 Sheridan Delapine, 69, Queen Victoria Street, London.—Improved method of and apparatus for estimating air in steam.
15267 J. Frederick Stillwell, 77, Chancery Lane, London.—Improvement in engines operated by gas, vapour, oil, or the like.
15278 Walter Rowbotham, 27, Vittoria Street, Birmingham.—Improvements in vapourising apparatus for explosion engines.

SPECIFICATIONS PUBLISHED.

- 13785, Ashlin, steam generators; 15410, Baker, steam generators; 15549, Mumford, steam generators.
The above specifications published may be had of Messrs. Rayner and Co., 37, Chancery Lane, London, at 10d. each, including postage.

NEW COAL DISCOVERIES IN POLAND.—It is reported that some extensive deposits of coal have recently been discovered in Poland, near Krosnowitz, on the Warsaw-Alexandrov railway.

THE HANNAN'S BELT.—A map which will be found of great utility to investors interested in the West Australian gold fields is that recently issued by Messrs. Eddington Wilson, of the Royal Exchange, London, which contains the gold mining leases situated on the direct Hannan's Belt, Kalgoorlie. The accuracy of the map is vouches for by the fact that it has been compiled under the direction of Messrs. Gledden and Manning, mining surveyors, by Mr. C. W. Cropper, late of the Trigonometrical staff, New South Wales, and issued with the sanction of the West Australian Government. The size of the map is 30 inches by 50 inches, and for clearness of lining and lettering leaves nothing to be desired.

NEW RUBY MINES IN BURMA.—The Indian newspapers report that the new ruby tract of land recently discovered in Upper Burma, at a place called Nannayatseik, situated to the north-west of Kamaing, in the Mogaung district, is proving a great success, giving labour to many people. Numbers are applying for land to carry on mining, and already large sums have been paid into the Government Treasury for the purpose. About Rs. 40,000 have up to date been collected as mining fees for licenses issued.

JOINT-STOCK COMPANIES.

NEW REGISTRATIONS.

THE following are among the joint-stock companies registered at Somerset House since our last notice:—

Gloucester Gold Mining Company (Limited).—Registered July 1 by H. S. Sugden, 10, Ironmonger Lane. Capital £100,000, in 2s. 6d. shares. Registered office, Throgmorton House, E.C.

British and Colonial Trading and Development Company (Limited).—Registered July 1 by F. J. O'B. Hale, Moorgate Court, Moorgate Street, Capital £200,000, in 4s. 0d. ordinary and 2s. 6d. founders' shares. Registered without Articles of Association. Registered office, Bevis House, 22, Basinghall Street, E.C.

Fairhays Creek Gold Mines (Limited).—Registered July 1 by Harvey and Speed, 165, Dashwood House, New Broad Street, E.C. Capital £120,000, in £1 shares. To acquire, mine, mining rights, and auriferous land in Gippsland, in the colony of Victoria, Australia. Registered office, 131, Dashwood House, E.C.

Belmore Hill Amalgamated Gold Mines (Limited).—Registered July 7 by Trinder and Capron, 47, Cornhill, E.C. Capital £150,000, in £1 shares. For the acquisition, by purchase or otherwise of certain mining leases in the Belmore Hill district, New South Wales. Registered office, 24 and 26, Basinghall Street, E.C.

Devonian Gold Mines (Limited).—Registered July 10 by Kingford, Dorman and Co., 23, Essex Street, Strand, with a capital of £100,000 in £1 shares, to acquire mines, mining rights, &c., in Western Australia. Registered office, 110, Cannon Street, E.C.

Kalgoorlie and Mount Sir Samuel Proprietary (Limited).—Registered July 8 by Williams and Neville, Winchester House, E.C. Capital £100,000 in £1 shares. Objects: To acquire five gold mining leases—Nos. 1401 to 1405—in the Kalgoorlie district of East Coolgardie gold fields, Western Australia, and also nine leases—Nos. 45 to 54—situate near Mount Sir Samuel, East Murchison gold field, Western Australia.

Newman's Exploration Company (Limited).—Registered July 8 by Wilson, Bristows, and Carmichael, Coothall Buildings, E.C. with a capital of £100,000, in £1 shares, to seek for and secure openings for the employment of capital, also mines, mining rights, &c., in West Australia.

Braganza (Mozambique) Gold Mining Company (Limited).—Registered July 9 by Edwin Andrew and White, 27, Clement's Lane, E.C. with a capital of £20,000, in £1 shares, to acquire lands, properties, mines, mining rights, &c., in South or Central Africa. Registered office, 23, Buxtonbury, E.C.

Burbanks Consols (Limited).—Registered July 9 by Vallance, Birkbeck and Co., Lombard House, E.C. Capital £20,000, in £1 shares.

Zelma Gold Mines (Limited).—Registered July 9 by H. Stanley Sugden, 10, Ironmonger Lane, E.C., with a capital of £20,000 in £1 shares, for the acquisition of certain mining leases, mining rights, &c., in Mackay, Queensland. Registered office, 32, Old Jewry, E.C.

Pineville Coal Company (Limited).—Registered July 10 by Kirby, Son, and Verden, 14, Great Winchester Street, E.C. Capital £20,000, in £1 shares, divided into 25,000 A preference shares, 40,000 B preference shares, and 15,000 ordinary shares. To acquire by purchase or otherwise any estate, right, or interest in mineral or other lands, seams, veins, beds of coal, ironstone, brick, earth, fire, and other clay, metal, minerals, mineral oil, and other substances; and further to acquire any mines, mining, water and other rights, grants, leases, claims, concessions, options of purchase, and metalliferous land. Registered office, 5, Austin Friars, E.C.

Mines Corporation of New Zealand (Limited).—Registered July 11 by Jenkins, Baker, and Co., 134, Fenchurch Street, E.C. Capital £50,000, divided into 500,000 £1 ordinary and 500,000 deferred shares, of a like value. To acquire any mines, mining rights, &c., in New Zealand, Australia, Tasmania. Registered offices, 3, Princess Street, E.C.

Anglo-Siamese Sulphur Company (Limited).—Registered July 11 by Dawes and Sons, 9, Angel Court, E.C. Capital £1,035,000, divided into 1,000,000 preference shares of £1 each, and 700,000 ordinary shares of 1s. each. Objects: Primarily, to consolidate the sulphur interests of the various sulphur producing countries of the world; generally to carry on business as sulphur manufacturers, agents, and dealers (whether crude or refined).

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

* We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.

Due date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

Pump, July 28 (India Office, S.W.)—The Secretary of State for India in Council is prepared to receive tenders to supply pumps (hand power). The conditions of contract may be obtained on application to the Director General of Works, India Office, Whitehall, S.W.; and tenders are to be delivered at that office by 5 p.m. on 28th Inst.

Coal, July 30 (Gool).—For the supply of good house coal (120 tons, more or less) to the schools of the board during coming winter, for the Goolie School Board. The coal must be delivered to the different schools in such quantities and at such times as the board may direct. Tenders, each endorsed "Tender for Coal," should be sent to the clerk by 30th Inst.

Coal, August 1 (Cardiff).—For the supply of about 330 tons of house and 26 tons of steam coal, to be delivered as required at the town hall, police and firebrigade stations, markets, slaughter-houses, baths, and cemetery for six months, from October 1, for the Cardiff Corporation. Sealed tenders, endorsed "House Coal" or "Steam Coal," with the name of the colliery stated thereon, to be sent to Mr. J. L. Wheatley, town clerk, Town Hall, Cardiff, by August 1.

Railway Stores, August 11 (Utrecht).—For the supply of 81 tons of railway stores, &c., for the Nederlandsche Staatse Railways. Particulars to be obtained from the Utrecht Stores and at Rotterdam and Arnhem.

Rolling Stock, September 8 (Karlsruhe).—For the supply of about 84 railway carriages of various classes, and 400 goods wagons. Application to the Direction of the State Railways, Karlsruhe, Baden.

THE IRON ORE TRADE IN SPAIN.—As in the preceding months there has been great activity during June in the Spanish iron ore trade, the exports of Great Britain alone during that month having amounted to no less than 443,823 tons, as compared with 408,133 tons in the preceding month, and only 309,185 tons in June last year. The brisk state of affairs which has prevailed in this trade is well shown by the figures relating to the exports during the first half of the year. During that period no less than 2,510,379 tons of Spanish iron ore were shipped to British ports, as against only 1,775,948 tons in the corresponding period of last year and 2,011,226 tons in the first six months of the year preceding.

THE WEST COAST OF AFRICA.—Messrs. Julian Harvey and Co. of 11, Queen Victoria Street, E.C., who we are glad to find full of work, have just supplied some prospectors' machinery for the West Coast of Africa for treating alluvial deposits.

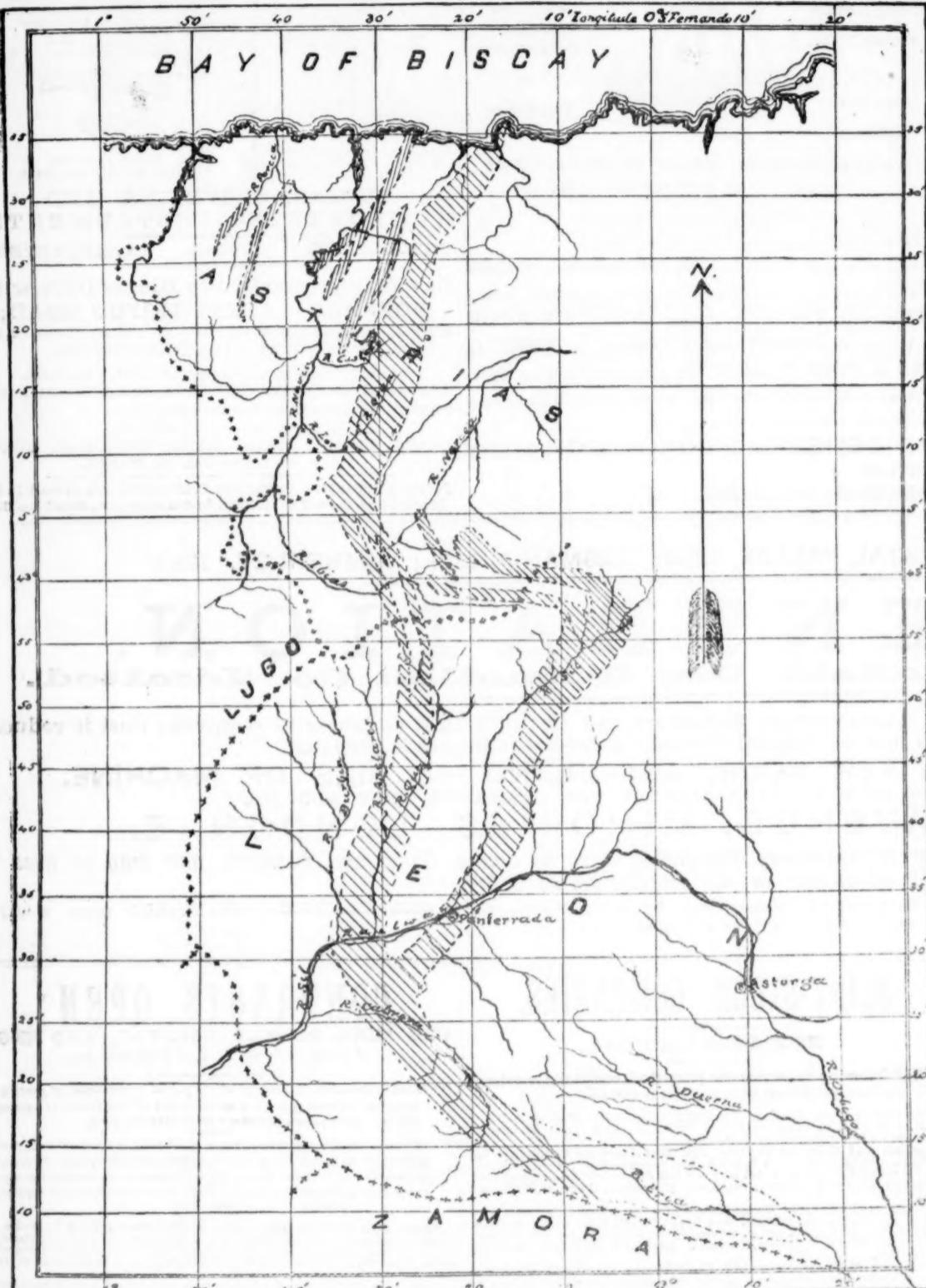
MESSRS. FREDERICK C. MATHIESON AND SONS' Monthly Mining Handbook is to hand.

The DAY DAWN BLOCK AND WYNDHAM GOLD MINING COMPANY (LIMITED) has sold through Messrs. Johnson, Matthey, and Co. (Limited) the bullion ex s.s. India and Duke of Buckingham for £17,173 10s. 9d.

MINING IN ASTURIAS (SPAIN).

GOLD.

THE auriferous zone in this province was noticed in the Journal of February 8 last. It is well to continue the notes respecting it in its course through the adjoining province of Leon. The disturbance which caused the upheaval of the Cantabrian range affected the general quartzite belt mentioned in the article above referred to—distorting it, and breaking it up into isolated masses, changing the general direction of these on the eastern side, from southerly to nearly due east, and splitting up the western portion into parallel runs without altering their general direction. This may be better seen by referring to the following general plan of these:



These of the western portion continue into the province of Leon, and present themselves as a guide to the gold seeker in his researches in that province. Following, then, this quartzite belt over the disjunctive Cantabrian range, through the pass called the Puerto de Trayecto, at an altitude of 1450 metres above sea level, we find it continuing in a south-westerly direction on the southern flank of the range. This district is drained by the rivers Sil, Burbia, Anclares, and Qua, all of whose beds and banks are auriferous. Thus it continues to Las Medulas and Puente de Domingo Flores. Here it changes to a south-east direction, and continues for many leagues, until it is cut off by the mountain range that divides the province of Leon from that of Zamora. This second portion is drained by the Rivers Duerna and Eria, both of which are highly auriferous.

Throughout the whole of these various districts there are the vast remains of an enormous activity in ancient times; these consist of subterranean labours, immense deposits of débris and the tracings of water leats carried over long distances, with here and there immense reservoirs, where water was collected to boom the beds of alluvion in their vicinity. Great beds of this have been partially worked by these ancients, who, from the remains, such as coins, bricks, &c., met with, were undoubtedly the Romans. They went about their work in a systematic manner, and doubtless secured satisfactory results. They left their mark about the Rivers Anclares and Burbia, where there are quarries in the quartzite, and some workings in the quartz reefs, all showing more or less gold. These were taken up some years ago by a Barcelona company, and the birth of the enterprise was notified by a grand fanfare. Prognostications of great immediate success were not wanting, and the first call on the shares was paid. When this had been expended in preparations, and shareholders became clamorous for dividends; they were

met with notice of a second call, which they could not entertain, in view of the prophecies that had been promulgated. They expected immediate output of gold in large quantities, could understand the question of dividends in a marked degree, but could not put up with preliminary expenditure and delay in receiving these, and the company became extinct before doing any work.

The Duerna district was secured by a London company, with a French administration, in 1886. Here a large outlay was made to hydraulic the gravels. A portion of these had been boomied by the Romans. These ancient but thorough miners had adopted the only feasible way of working these beds, since to run the whole body of the tailings into the rivers would soon have converted the agricultural land on their banks into a howling desert, and that the farmers would not allow. The attempt made to hydraulic was, therefore, a dead failure, and the company liquidated.

In Asturias the alluvions are very limited, owing to the abruptness of the mountain sides, and the narrowness of the valleys, so that the exploitation of gold as a great industry must be carried on by reef mining; but in Leon there are very extensive tracts of these alluvions in one part and the other of the province. Some of these have been worked by the Romans, others are intact, and amongst these last are some beds that merit careful prospecting. But the grand future of these districts must be looked for in the reefs, from which the alluvions have been charged. Undoubtedly all the gold has been transported from the weathered quartz reefs and quartzite masses.

With the exception of the Barcelona Company above referred to, who, after all, did nothing beyond securing the titles to the mines for the time, no one appears to have paid any attention to these reefs, and certainly there has been no systematic prospecting or exploring done.

For many generations gold has been panned out by the country people during the dry season from the banks of the Sil and its tributaries—the Burbia, Anclares, and Qua. This tends to show that the upper reaches of these rivers are continuously eroding and excavating rich auriferous deposits, and the quarry and lodges of the defunct Barcelona Company show where some of these deposits exist. Starting from these as a base others would soon be unearthed.

Energy, intelligence, perseverance, and capital are needed to carry forward the investigations, and to bring about results that would be satisfactory to all who took an interest in the matter.

"KARMAL" ENGINE PACKING.

THIS is an old friend under a new name. For many years the Frictionless Engine Packing Company (Limited), of Cable Mills, Manchester, have sold their packing for engines and other purposes under the name of "Frictionless." The wide reputation it has gained, and its well deserved popularity, have led to that often-repeated form of flattery which is one of the best tributes of success—namely, the imitation of the trade name. Unfortunately for the makers, and also for buyers, who have learned to associate the packing they prefer with the style of Frictionless, this word cannot be monopolised under the Trade Mark Act, and the makers have adopted the more distinguishing and copyright name of "Karmal." Any annoyance and disappointment which may have been caused by the substitution of a different make can be readily avoided for the future by specifying under the new name. We have much pleasure in calling the attention of our readers to this verbal change, for the well-known qualities of the packing remain the same.

Every engineer knows the importance of an efficient and serviceable steam or hydraulic packing, and this is what "Karmal" has undoubtedly proved itself to be. It has been before the public for 14 years, and the makers can point to the testimony of their wide range of customers in support of their claims; they have also obtained 14 highest awards for their packing at exhibitions held in this country and abroad. It is claimed for this article that it lasts longer than any other packing for both steam and water, and that by its use the annual cost for packing is considerably reduced, while the glands are kept tighter and the rods preserved in better condition. In addition to this packing the company also make metallic, semi-metallic Railite asbestos, hemp cotton, and many other kinds of packing, also indiarubber sheets, washers, valves, hair and cotton belting, and the like.

BRITISH GUIANA'S GOLD INDUSTRY.

The R.M.S. *Esk*, which left Georgetown on June 25, took gold to the amount of \$59,565.47, the Colonial Bank shipping 1087 ounces 1 dwt. 14 grains, and the British Guiana Bank 2272 ounces 14 dwt. 19 grains; total, 3359 ounces 16 dwt. 9 grains.

The following are the returns of gold entered at the Department of Mines for the weeks ending:

	June 20.	June 27.
	Ozs. dwt. grs.	Ozs. dwt. grs.
Barama...	131 6 13	100 7 17
Barima ...	342 8 11	502 17 11
Cuyuni ...	580 18 1	271 2 14
Essequibo ...	354 4 21	662 14 0
Groote Creek ...	38 1 7	17 9 8
Mazaruni ...	4 11 19	—
Potaro ...	221 18 22	221 15 4
Puruni ...	108 7 11	81 6 6
Total ...	1781 7 9	1857 12 22
Export of gold from January 1 to July 6:		
	Ozs. dwt. grs.	
1896 ...	52,453 19 22 at \$933,973.46	
1895 ...	56,421 5 18 at \$999,336.07	

IN BRIGHTEST AFRICA.—This is the title of an instructive pamphlet just issued by the eminent advertising firm of T. B. Brown (Limited), of 163, Queen Victoria-street, E.C. Its chief object is to point out what a magnificent market South Africa offers for the extension of our trade and upon its advertising value. Owing to the late political disturbances and to the present disruption many are fearing that it will have a serious effect upon trade, but a perusal of this pamphlet will reassure them, and remove all their fears and pessimism. As we have said, it proves to be most instructive reading, and should do a great deal to restore confidence in the future of our great dependency.

TRANSVAAL EXPLORATION COMPANY (LIMITED).—We are informed that the provisional allotment letters for 43,548 shares of the present issue of 50,000 shares of the Cataract Barberton Gold Mining Company (Limited) have been posted to the shareholders of the Transvaal Exploring Company (Limited) and the Transvaal Lands Company Limited.

INVICTA GOLD MINES (LIMITED).—The Chairman of the company (Mr. Edward Rawlings) writes:—"In your issue of June 6, through an inadvertence on our part, Mr. A. D. Mitchell is described as manager of the above mine. This is incorrect. Mr. Mitchell is our purser, but Mr. W. R. James Young is our manager and engineer."

BARRY, HEAD, AND CO'S WEEKLY REPORT.—There are no actual changes in prices to report since last week, although the tendency is to stiffen, particularly for finished iron and steel. Nearly all works are fully booked up with orders, and prompt delivery can only be obtained in most cases at a slight advance upon present figures.

WESTERN AUSTRALIA.—The *Times*' correspondent, writing from Melbourne on July 22, says:—"The Premier of Western Australia, Sir John Forrest, has introduced the Coolgardie Water Supply Bill, providing 5,000,000 gallons daily—2,000,000 gallons for domestic purposes sufficient for 100,000 persons, and 3,000,000 gallons for mining purposes, sufficient to work 300 batteries. The total cost is estimated at £2,500,000. The price of the water is to be 3s. 6d. per 1000 gallons. Sir John Forrest said that the scheme would reduce the cost of living and would largely increase the yield of gold. Supposing that 300 batteries crushed $\frac{1}{2}$ ounce per ton, the total output would be of the value of £7,000,000."

THE CAUSES OF DEATH IN COLLIERY EXPLOSIONS.

(Concluded from page 921.)

THOSE who know what a haulage-road traversed by an explosion is like will realise how slight the chances are for men—either with or without lights—of ever reaching the shaft. The best plan for those imprisoned would seem to be to remain in the first place where they are, and if possible, to erect curtains or stoppings of some kind between themselves and the main roads, in order to keep back the afterdamp. The curtains should be erected at a point beyond the door opened towards a return-airway, so that the afterdamp, carried inwards as the rescuers restore the ventilation, may have a free passage into the returns, and not be driven in upon the men. Any attempt to get out should be made with the utmost caution, and whenever afterdamp is encountered, the only safe plan is to retire. In attempts to get out, one man only should go on slowly in front, two or three men some distance behind, being ready to rush in and drag him back should he fall. The reason for this precaution is that carbon monoxide only accumulates slowly in the blood, and a man who is fresh can generally go with perfect safety for a short time for rescue purposes into an atmosphere which would after a while produce deadly effects. It will often be much easier to reach the shaft by return-airways than by the haulage-roads, and one way may be tried if the other proves impracticable; but whichever way is taken, the utmost caution is necessary, on account of the very insidious action of the afterdamp. When all ways of escape are for the time blocked, every effort should be made to keep back the afterdamp by curtains or stoppings until the rescuers make their way in. Imprisonment for several days without food or drink is not dangerous, although far from pleasant. In many mines fire-damp will accumulate near the higher parts, and makes a prolonged stay at the face impossible; but the fire-damp will drive back the afterdamp; and it must also be remembered that it requires about 60 or 70 per cent. of fire-damp to endanger life, although 5 per cent. will put out a lamp.

In many cases where the flame reaches, or nearly reaches, the face, the only possible chance of escape would seem to be by return-airways, if these can be reached in time. It is provided by law that there shall always be two ways of escape from a mine. This provision would seem, however, to be in some emergencies useless, through the men not knowing the way by the return-airways, and having no fireman, or other officer of the pit to guide them at the time. If the author is right as to this, the matter certainly seems to deserve attention. In the case particularly of an underground fire in an intake-airway, a man's only chance may be to hurry out along a return-airway.

The first thing which is thought of by those on the surface is, of course, the getting of air into the pit. If the fan has been damaged or thrown out of action by injuries at the top of the upcast shaft, the author believes that fresh air will at first pass down the upcast shaft freely, in consequence of the suction produced by heating the sides and contained air in the downcast, up which the flame has probably passed. This, at least, was the case at Micklefield, where the first of the rescuers descended by the upcast, brought out a number of men alive, and even penetrated a considerable distance inwards, although the face could not be got ready for about twelve hours. The work of temporarily restoring the stoppings, doors, &c., and so carrying the air inwards, would be much facilitated by using mice as indicators of the presence of afterdamp. Without some such indicator not only are the dangers to the rescuers very great, but much time must be consumed in helping disabled comrades, or from uncertainty as to where the afterdamp is. The writer also feels confident that in many explosions the provision of some simple apparatus for penetrating irrespirable atmospheres would also be of much service. The apparatus need only be used where it is desirable for a rescuer to go temporarily into a dangerous atmosphere. The main thing would always be to carry the fresh air inwards with the rescuers. Men employing any apparatus would have to be instructed beforehand in its use. An atmosphere containing carbon monoxide is not the place for trying hasty experiments. For the revival of disabled men, whether or not they have been burnt and injured as well as poisoned, the author thinks that oxygen cylinders would be of great service. Though in severe cases it will not restore consciousness, the oxygen will in a few minutes drive out most of the carbon monoxide from the blood, and thus give a man the best chance of coming round.

It seems to the author that considering the risks of an explosion in any fairly dry pit, however free from fire-damp, arrangements should be made beforehand for minimizing, as far as possible, the loss of life should an explosion occur. In the first place, the author feels certain that means might be devised for shortening the time which usually elapses before fresh air is again circulating through, at least, the main roads after an explosion. From an examination of the bodies found along main roads he feels confident that, although consciousness must very soon be lost, an interval of half-an-hour to an hour or more commonly elapses before death occurs from carbon monoxide poisoning, and that any plan for getting in fresh air within this time may be the means of saving many lives. As things are at present, there is nearly always a fatal delay. Very often the timbering connecting the fan with the fan-draft is blown out, or the covering of the upcast shaft is blown off, and this causes much delay and great danger to rescuers. This might, perhaps, be avoided by the provision of light movable flaps, which by opening outwards would relieve the pressure caused by the rush of air up the upcast shaft.

Further delay arises from the blowing out of doors, stoppings, and air-crossings connecting the main intake-airways with the main return-airways. These main air-crossings, &c., might surely be so solidly constructed as not to give way. The pressure during an explosion is probably not nearly so formidable as is sometimes assumed. So far as the writer is aware there is nothing in a colliery explosion remotely resembling the detonation of, say, a mixture of hydrogen or fire-damp with pure oxygen, and the greater part of the energy liberated by the combustion must be rapidly taken up by the large excess of coal-dust swept up by the blast. If the means suggested were successful, the author believes that men lying along the main roads would (with the exception of the very few who are killed at once by violence) have a chance of recovery, and that those further in would have a much better chance of escape.

For men, far in, all the means suggested would, the author fears, avail little, in cases where the flame reaches up to, or close to, the face. Escape will often be cut off in every direction, and the afterdamp will very rapidly close in. This is what happened, for instance, with the great majority of those who were killed in the Llanerch explosion. They had only gone a short way before they were overcome; and even had they stayed in their places they would probably also have perished. To meet such cases it seems to the writer that probably the least expensive and most practical method would be to provide within easy reach some form of oxygen apparatus for enabling the men to make their way out to the fresh air near the shaft, and to have them previously instructed in the use of this apparatus. The writer does not think that there can be any doubt as to the practicability of this plan, but the trouble and expense would be considerable, in view of the fact that in most pits a serious explosion never occurs at all. Now that we know that there is plenty of oxygen left along the track of an explosion, the writer believes that the whole problem would be solved if only a cheap and efficient absorbent could be found for carbon monoxide. Air can be freed by means of respirators from almost any other poisonous gas, and it is singularly unlucky that the blood passing through the lungs should be just the one thing which absorbs carbon monoxide rapidly.

The prevention of colliery explosions does not, of course, come within the scope of this paper, but the writer can hardly refrain from adding his voice to that of others who have already urged the pressing need of careful experiments with a view to determining the available means of preventing the propagation of explosions by coal-dust. Each new explosion, is, of course, a new experiment; but it is a terribly costly one, and often the facts connected with it either cannot be ascertained, or, if ascertained, afford no new information.

* From a paper read by Mr. John Haldane, M.A., M.D., Lecturer in Physiology, University of Oxford, and Grocers' Company Research Scholar, before the North of England Institute of Mining and Mechanical Engineers.

MINING IN VICTORIA.

(FROM OUR OWN CORRESPONDENT.)

A VICTORIAN MOUNT MORGAN.

THE above title has been given within the last few days to a narrow mountain spur of the dividing range about 13 miles from Marysville on the Reefton track; a small bridle path off the well-known Yarra track, which leads to the celebrated Woods Point, Matlock, and Jordan gold fields. Few of the many tourists and pleasure-seekers who visit the locality every summer in great numbers can imagine the scene that is taking place there to-day. The stillness of the forest is broken by the sound of the axe, and the whole district within the short space of a fortnight has become one network of lease pegs, due to the discovery by three prospectors, named Robert and James Clingan and D. McKechnie, of an immense auriferous formation, extending over a large area of country, giving some millions of tons of crude material for treatment. I have been on the field three days, and was so impressed with what I saw that on my return to Melbourne I sent a special expert on to the ground to make a thorough examination. We have conferred together as to the nature of this report, and had better openly and straightforwardly admit that it is impossible to give anything like a correct idea of the new find. The local Press has designated the discovery "a mountain of gold ore." To say it is otherwise would be an attempt to define the immeasurable, and live on oblivious of the fact that some of our best experts—competent and trusted men—failed in their opinions when they first saw the Queensland Mount Morgan and the Broken Hill silver field.

Strange to relate that both these fields were nearly condemned at their start by "expert" opinion. It would be cruelly wrong to give names, lest it be construed as an insult, where no offence is intended, but merely to remind your readers that in this case it is infinitely better to chronicle developments than to assume the rôle of a prophet simply for the reason—I don't know; and I am morally sure in stating, the other fellows don't know either. Everyone is interested, or has become interested, and while this is so, amongst such a flood of interested talk, I give up the task of digesting the volumes of reports that have appeared in connection with the discovery. I will simply record what I saw; there is not the slightest indication of a lode. A ferruginous sandstone full of metalliferous veins outcrops for miles in length and width. Here and there free gold is visible in the sandstone, and from several rough assays made by myself and the expert who subsequently reported to me, averaged 15 dwts. to the ton, while the vein stuff went from $\frac{1}{2}$ ounce to $1\frac{1}{2}$ ounce to the ton. A shaft in the prospectors' claim has been sunk to a depth of about 30 feet, where the body of stone sunk on at this depth is full of iron and arsenical pyrites, the latter having a greenish tint. An attempt has been made to locate the auriferous belt to a width of about 500 feet between walls, but as the same surface outcrop appears for miles, and furthermore in the shaft and costeanning trenches no wall has been exposed, there appear to me just as much ground for saying it is 500 chains, as 500 or 100 feet wide. To enable your readers to form their own opinion I give extracts from the several reports available.

Mr. E. A. Ball, M.E. (who specially reported for me) says:—"I use the term Mount Morgan, because I was so impressed with the appearance of the formation as resembling in a very remarkable degree that of Mount Morgan, Queensland. The rocks consist of sandstone and mudstone, and impregnated with ironstone leaders mixed with quartz, also patches of ironstone, the whole carrying pyrites in greater or lesser proportions. I took samples from different parts in an occasional manner and have had them assayed; the result is 1 ounce 15 dwts. 2 grains of gold to the ton. The material available is of enormous extent, and with a permanent supply of water and economical management the results should be most satisfactory. I intend visiting the place again at an early date, and will furnish you with full particulars on my return."

Mr. R. A. F. Murray, Government Geologist, in a report to the Minister of Mines, says:—"The accounts that have appeared in the Press have excited considerable public interest, and have led to the formation of perhaps somewhat exaggerated expectations as to the value of the find, though at present there has not been sufficient evidence obtained as to its real worth. . . . There is, however, no actual dyke nor lode, but a broad belt or group of the Silurian rock bands, strongly impregnated with pyrites and with the brown ironstone resulting from their decomposition, and also with veins and patches of quartz. The rocks consist of quartzites, sandstones, and mudstones, containing numerous veins and vugs filled with a mixture of ironstone and quartz, resembling some of the ore of Mount Morgan, in Queensland, but as regards general features the resemblance to the descriptions given of the latter ceases here. The oxidised material does not seem to extend far below the surface, and the pyrites predominate with increasing depth. I took at random some small samples, and on treatment by ordinary dollying and washing obtained a fair prospect of fine gold, besides much pyrites. . . . Should such trials prove a fair average bulk of the yield, even if only a few pennyweights per ton, there need be no fear as to the ultimate success of the undertaking, as the available tonnage is enormous, and there are excellent facilities for working it most economically with water power. . . . Without, therefore, indulging in too sanguine a forecast, I feel justified in recommending a further exhaustive test as above indicated, but would add the caution that there are no present inducements to cause men without capital to flock to the field."

Mr. G. Thureau, F.G.S. (late Government Geologist and Inspector of Mines, Tasmania), reporting for the discoverers, says:—"The metalliferous portions of this deposit are both rich in gold, and partake of an unusual development in comparison with other and similar gold matrices. . . . This cannot be admitted to what is generally known as 'lodes.'

A more appropriate term would be 'stock work,' derived from the German 'stockwerk,' which means an almost illimitable congregation of metalliferous veins, &c., of such dimensions as could be profitably operated upon by means of 'open cuts' on the 'terrace system.' . . . The average bearing of the above is S. 80° east, and that its actual width has not, so far, been determined. . . . Fifteen samples rudely crushed yielded at the rate of from 5 dwts. to nearly an ounce per ton of free gold. . . . The occurrence of the minerals stated, and the visible and strongly developed appearance of the ferruginous-manganese matrices are, in my opinion, clear proof of this unique formation descending to great depths, and along the strike of the former it may be stated that nearly 1000 feet have already been exposed to view. . . . will undoubtedly prove this gold deposit as one of the largest known in Australia."

Mr. E. M. Cairnes, F.G.S. (late of the Victorian Mines Department), reporting for the discoverer, says:—"I shall undertake everything, and confine myself to salient points. . . . The formation consists of an enormous dyke about 10 chains wide, passing through a belt of Silurian country, chiefly sandstone. The ore-body consists mainly of brecciated ferruginous sandstone, which carries the gold. In parts elvanite and other porphyritic and

felspathic matter intermixed with lava dyke, limonite (brown iron ore), psilomelane (proloxyde and hyperoxides of manganese), iron and arsenical pyrites, traces of quartz and quartzite, silicious matter, and various other minerals, which carry gold en masse, as if deposited by hydrothermal action. The zone of oxidation appears to be near the surface, and judging from the shaft, the mineral (pyritous matter) increases in richness with depth. At 40 feet I estimate the mineral to be 20 per cent. of the ore therefrom, and worth 1 ounce of gold to the ton of ore, apart from the free gold, which prospects about $\frac{1}{2}$ ounce of gold to the ton of ore. . . . I have traced the gold by outcrop and floaters sufficient to warrant me to estimate the ore by millions, instead of thousands of tons. With regard to yield, suffice it to say that the result from the trial crushing (made at Mr. Geo. Lansell's No. 1 Bendigo battery), from the shaft of 29 bags of stone—less than 5 tons—was 2 ounces 8 dwts. of retorted free gold, or, in round numbers, $\frac{1}{2}$ ounce to the ton. The tailings assayed 4 dwts. 21 grains, say 5 dwts. per ton, and the clean concentrates or mineral estimated from 10 to 15 per cent., or a mean average of 12 $\frac{1}{2}$ per cent., assayed 8 ounces 1 dwt. per ton, or equal to (say) 1 ounce of gold per ton of ore, thus giving a yield by actual crushing equal to 1 ounce 15 dwts. of gold per ton of ore."

Mr. James Clingan, the discoverer, says:—"I was several years at the Mount Morgan Mine, Queensland . . . the formation on the Reefton track being exactly the same; it consists of a hill of ironstone, &c., carrying a high percentage of pyrites. I believe that this lode will eclipse the Queensland Mount Morgan in size and returns, for the ore can be mined and crushed for a cost of 3s. per ton."

Dozens of other reports are appearing, but as those above quoted were made at the time publicity was given to the discovery, they have an especial interest in connection with it. Certainly Mr. E. M. Cairnes is the most sanguine of the experts who have visited the field, but at this stage it would be unwise to contradict any statement short of an absolute falsehood or wilful mis-statement. To anyone who has visited the field it is impossible to resist the impression that the locality is destined to become one of the greatest gold fields in Australia. Victoria at the present hour is reeling in the eddy of a boom. This new find will precipitate her into the vortex quicker than expected. It will not be a diggers' rush or a specimen show. Large capital will be required. It may properly be described as a capitalists' field. We shall soon see, with such large tonnage to operate on, 100 head batteries and large cyanide works erected. With this era the days of toy 10 head batteries in Victoria will be doomed; instead of costly searching for small rich lodes, as is now the case outside of such fields as Bendigo and Ballarat, we shall have investors satisfied with material that will pay dividends on a gross return of 13s. to 14s. per ton. The only mistake likely to be made is to suppose there is only one such formation in Victoria. For large tonnage of low grade ore there is no place in the colony that can excel the Heathcote district. Now that we are wise after the event, numbers of people are pointing to every sandstone hill as a Victorian Mount Morgan; perhaps they are such, but Heathcote alike with Reefton will be the first to prove their mettle and attract capitalists. While I believe honest reports will be furnished on the new ventures likely to arise from these discoveries, I strongly emphasise the fact that it is absolutely necessary for English capitalists to send their own experts to the colony to see for themselves, if they intend putting money into them. Independent expert opinion has already become too largely mixed up with the schemes afoot to become a reliable guide to investors at a distance. When I saw the forest of lease pegs at the Victorian Mount Morgan, I made the safe calculation that every man, woman, and child in the colony—not forgetting experts and Press correspondents, which includes myself—had a lease for sale, and 90 per cent. of these would see London. In the words of the inspired Homer, "Non porco die!" ("It isn't every day we kill a pig!").

Bendigo Gold Return for May.	Ozs. dwts.
Gold purchased by Bendigo banks, May, 1896..	19,053 7
" " " May, 1895..	13,573 17
Increase 1896.	5,479 10

BURMA RUBY MINES COMPANY (LIMITED).

The ordinary general meeting of the shareholders in the Burma Ruby Mines Company (Limited) was held on Thursday, at the Cannon-street Hotel, when Sir Lepel H. Griffin, K.C.S.I., who presided, stated that it was a source of great satisfaction to the board that at this meeting, which was the last under the old lease, they were able to present a very much more favourable report than ever before. He trusted that a period of prosperity was now opening to them. The result of the year's working, although it had now been altogether a fortunate year, no specially good stones having been found, was that there was a surplus balance which would have been sufficient, had it been legal, to give a dividend of 5 per cent., besides carrying forward a substantial sum. The new lease was not altogether as favourable as they could wish, but the terms were the best they could obtain. The rent was reduced from four lakhs to Rs 3,15,000, but the Government were to get one-fifth of the net profits instead of one-sixth. As regards the arrears of rent, amounting to ten lakhs, six were altogether remitted, while the balance was to be paid by half the net profits after the payment of a 5 per cent. dividend. They were, however, making an offer to the Government to pay off the four lakhs at once if they would reduce their share of the net profit from 20 to 10 per cent. Before they could pay a dividend it would be necessary to write off from the capital the sum of £120,000 which they had lost. It was proposed, therefore, to make the shares of the value of 12s. each with 10s. paid, instead of £1 with 18s. paid.—The report was adopted.

NEW GORDON DIAMOND COMPANY (LIMITED).

An extraordinary general meeting of the shareholders in the New Gordon Diamond Company (Limited) took place on Thursday, at Winchester House, E.C., Baron Emile Beaumont D'Erlanger presiding, for the purpose of considering the following resolution:—"That this meeting hereby approves of the proposed plan for a sub-lease to a company about to be formed, to be called the Gordon Diamond Leasing Company (Limited), of 214 mining claims in the Dutoitspan Mine, of or belonging to the company, together with the plant, machinery, buildings, livestock, and effects used by the company in connection therewith, upon the terms set forth in the plan produced to the meeting, a copy whereof has been sent to each member of the company; and that the provisions of an agreement, dated July 14, 1896, expressed to be made between this company and Nathan Clayton, as trustee for and on behalf of the intended company, be and the same are hereby approved and adopted, and that the directors of the company be authorised to carry out the same."—In moving the resolution the Chairman explained that the London and South African Exploration Company had agreed to renew a portion of the leases of the property to the company, and in regard to the £52,000 they owed them the following arrangement had been made. The Gordon Company were to pay £18,000 in cash, and the payment of £16,500 in respect of new claim, and the balance of £13,000 would be spread over a period of six years. The amount necessary for carrying out the scheme was £58,000. It was practically impossible for them to go in for a reconstruction scheme, because of the debentures which have to be paid off.—Mr. Walter Emden, a member of the committee, seconded the resolution, which after some discussion was carried, with the addition of the following words:—"With such modifications, if any, as may appear reasonable.—Mr. Walter Emden and Mr. Wm. Bevitt were appointed directors, and the meeting closed with a vote of thanks to the Chairman.

THE "WILD WEST COAST" OF TASMANIA.

By F. E. HARRIS, M.A.I.M.E., M.I.M., and M. London.

ALTHOUGH lying, as one might say in the language of the bush, almost within "Coose" of our doors, comparatively few Australians, and still fewer of the inhabitants of the Mother Land, if we except some of those who, like myself, are connected with the mining world, have any idea of the vast mineral wealth, not to speak of the magnificent mountain and marine scenery, and the lovely and varied forms of vegetable life, to be found in what was looked upon, until very recent years, as a veritable *terra incognita*, and, until it was found to be rich in mineral wealth, land unfit for any kind of settlement. The indomitable pluck and energy, however, of the best class of pioneer in the world, the prospector, was not to be denied, and mile by mile the almost impenetrable scrub and forest, which clothes the whole of the coast from river bottom to mountain top, was penetrated, and rough tracks opened up, until at the present day the country may be said to have been fairly well explored.

Owing to the immense difficulties it is obvious that comparatively little of the mineral wealth has as yet been discovered, and it will be many scores of years before Nature yields up all its hidden lodes and deposits, as my readers can well imagine when I tell them that it is quite possible in most parts of the country to travel for miles by walking on fallen trees, ferns, and undergrowth without touching the earth. This may sound like "high falutin" talk, but when it is taken into consideration that the rainfall averages considerably over 100 inches per annum, the immense growth of scrub and forest can well be understood. One might say that it is always raining without being far out, as seldom 24 hours pass without a shower of some kind. This excessive rainfall is no doubt due to the high mountain range which runs parallel with the coast some few miles inland, and includes Mount Bischoff, Heemskirk, Zeehan, Agnew, Dundas, Lyell, Huxley, Darling, Sorell, the Frenchman's Cap and others, all bold rugged peaks, the last the highest, as it is also one of the highest points in Tasmania. It is named on account of the resemblance of its top as seen from a distance to the ordinary men's caps worn in France. Most of these peaks are becoming famous for some valuable deposits of minerals, and in the mining history of Australasia, and, in fact, the world, are destined to take an important place.

Mount Bischoff is celebrated for the greatest tin mine known, and there are few mining men who have not heard of this wonderful deposit. In the first instance, prospectors mistook the surface "slugs" of tin oxide for iron of little or no value, and it was left for Mr. "Philosopher" Smith to make the discovery that the hill was a mass of rich tin ore. The existing company was then formed, but got rapidly and heavily into debt, until the present manager, Mr. Kayser, took the reins, and quickly transformed it into one of the largest dividend-paying concerns in Australasia, which it is likely to be for many years to come. Mount Lyell is now rapidly becoming known throughout the mining world as probably one of the greatest mines as yet discovered; and will, in the opinion of many qualified to judge, within the next two years become the greatest dividend-payer in the southern hemisphere. Heemskirk is noted for its tin deposits, and a rush took place some years back, in which much Melbourne capital was lost. Many, however, still hold the opinion that payable mines will yet be found in the neighbourhood; and probably this will be the case as the country becomes more opened up, and working easier and less expensive. Zeehan and Dundas are well known for their silver-lead lodes, and the rush there some seven years back is still fresh in the memories of many who lost their money there. As is the case on most new fields money was injudiciously and recklessly spent, and the inevitable reaction came. Now the mines are being economically and systematically worked, the output of silver-lead ore is rapidly increasing, and will continue to do so, while Zeehan is a flourishing town of some 3500 inhabitants, destined to be much larger, and the centre of a vast ore producing district. Dundas, which a year or so back was almost defunct, is also improving owing to the good developments in some of the older mines, and the new discoveries constantly being made. Mount Huxley is notorious for having been made the scene of operations for mine "salting" on a large scale, and an attempt to float it as something better than the premier gold mine, Mount Morgan. Fortunately, although very nearly coming off, the fraud was discovered in time, and very little money lost over the business. No doubt gold exists there, but, so far, has not been found in payable quantities. At the other peaks named nothing of note has as yet been located, but as the geology of the surrounding country is all in their favour, there can be no doubt that as the localities become more accessible, new discoveries will be made, and the coming summer will see many new finds recorded. The wonder to the visitor is, How in the face of the difficulties to be encountered, the pioneers managed to exist at all? Frequently they had to pack their provisions and other supplies on their backs from Strahan and other parts of the coast for many miles through jungle and over mountains and streams that would deter the average man from attempting to traverse under any circumstances. Too much admiration cannot be expressed for these hardy adventurers who risked, and in many cases lost, their lives in opening up to civilisation, what is destined to be one of the greatest ore-producing districts in the world, and which is so well described as the "Wild" West Coast. Owing to the construction of the railway from Strahan to Zeehan, the approaching completion of the Strahan Mount Lyell line, and rough tracks cut to the principal centres, the traveller can now get about the country with comparative ease, but it is still rough enough, as most of the locomotion has to be done on foot, and wet feet all day, and every day, are the rule. Still it is healthy, colds being rare, while rheumatism complaints, which, under the circumstances, might be expected to flourish, are almost unknown.

Those who have read, and there are few among us who have not, that powerfully written and realistic work—"For the Term of his Natural Life"—can forget the horrors depicted therein, as suffered by the unfortunate wretches who, escaping from the penal settlement at Macquarie Harbour, tried to make their way across the country to the settled districts. None were ever known to succeed, and few ever reached as far as the Frenchman's Cap, which is, as the crow flies, not more than 30 miles from the island in the harbour on which the settlement was. This was then known as Sarah Island, but is now called Settlement Island. Those who did not perish in the bush were glad to return and give themselves up to the authorities to endure the living death of the brutal system then in force. As the distance from the settlement to Hobart in a direct line is only about 100 miles, and the same to Launceston, it does not require a skilled bushman to grasp how the nature of the country is against the traveller, for the convicts were insured to toil and exposure of all kinds, and it was a matter of life and death to them.

Under all the disadvantageous circumstances, therefore, the more praise is due to the men who, of their own accord, and, as a rule, at their own expense, have explored this inhospitable

country, and given us what will probably be in the near future one of the most productive and richest mineral producing districts in Australasia, or possibly the world.

This opinion has been most forcibly impressed on my mind by two visits recently made, and I have no hesitation in giving it expression. The first, made in December, 1895, to Zeehan and Dundas, favourably impressed me with those localities, and the second in March last, when I also visited Mount Lyell and Mount Reid district, in addition to the two former, more than confirmed the first impressions. I would, therefore, strongly advise the genuine mining investor in search of good mines, where the conditions for working are all in their favour, to think of the West Coast of Tasmania before investing his money in some of the waterless, timberless countries, with their high rates of carriage, dear labour, and everything else against economical mining, that are now being boomed so much. Personally of late years I have seen many mining fields, but nowhere have I been so much struck with the immense probabilities, not to speak of the discoveries already made, as in this district.

Within a distance as the crow flies of some 45 miles (from Mount Bischoff to Mount Lyell) we find the greatest tin mine, and, probably, the greatest copper mine known, while scattered throughout that distance, over a width of 15 to 20 miles, are innumerable mines, many of them of great value, of silver, lead, copper, and tin in large bodies, almost all the other known metals having been found in lesser quantities. In some of the mines a combination of the first three metals with gold is found—notably, the Curtin and Davis, the Hercules, and Barlens, much of the ore from these mines being very rich. Parcels from the Hercules have netted over £100 per ton, in face of heavy expenses in packing into Zeehan, the assays ranging up to 20 ounces gold and 255 ounces silver per ton. Barlens has not as yet sent away any ore, but assays have given up to 1700 ounces silver, 5 ounces gold, and 5½ per cent. copper per ton. Curtin and Davis have the same description of ore, but they are all awaiting the completion of the railway now being constructed from Zeehan, the terminus of which will be close to them, before sending away their ore. Carriage will then be reduced to about £1 per ton to Strahan, whereas it is now £4 per ton to pack it into Zeehan alone, and in addition to this transport for large quantities cannot be obtained. This railway, which is the first experiment of the 2 feet gauge to be tried on a large scale in these colonies, will open up a number of new mines, and as the Strahan-Zeehan line is already the best paying in the colony, its prosperity will be largely added to by the completion of the new line to East Dundas. That it will be a success is beyond question, and there can be little doubt that as feeders for the heavier lines, and especially in a mountainous country like this, these narrow gauge lines are the most suitable. The cuttings for a heavier line would be enormous, and compared even with a 3 feet 6 inch line the construction is comparatively very little. That a 2 feet line will do the work thoroughly and well has been demonstrated at Zeehan by the Western Silver Mining Company and a local company, which latter has a line running from the Government railway terminus, which is situated about a mile from the centre of the town, through the town, with branches to some of the mines. The Western Company's line extends from the town to a distance of some 3 miles beyond the mine, a total of 4 miles. Both lines have given every satisfaction, and conclusively proved the suitability of the gauge to the district.

Numbers of other mines carry the above-mentioned rich ore, and there are several immense bodies of similar character to Mount Lyell, though not quite so extensive, now being prospected. One of these, the Colebrook, has been driven across for over 80 feet without meeting the walls. It is richer in copper than Mount Lyell, while it is so heavily charged with axinite that it will smelt more readily than any other ore in the district. Many of these properties show every indication of becoming big mines when the success of Mount Lyell draws the amount of attention and capital it deserves to this hitherto much neglected district. This neglect has been brought about partly owing to the failures at Heemskirk, and the early mistakes, and consequent temporary failure at Zeehan and Dundas, but more particularly by the inaccessibility of the country, and in no small measure by the difficulties of navigation. Macquarie Harbour, although it is, when once inside, one of the finest harbours in the southern hemisphere, is blessed with that bugbear to mariners, a bar, and is only accessible to boats drawing under 9 feet. This, of course, prevents vessels of large size from entering its portals, but with the increase of trade which must come, no doubt something will be done to allow vessels of deeper draught to enter.

On March 19, in company with a gentleman who is heavily interested in West Coast mines, I left Melbourne for Strahan on board the steamship *Glenely*, one of the line of small steamers which run to that port in connection with the other west and north-west ports, Hobart and Launceston. The accommodation is not too good in these little craft of about 200 tons, and we found her full to the hatches, and crowded up on deck with iron rails, timber, &c., besides 70 fat sheep destined for Strahan and Zeehan butchers. The weather being cold, and, as per usual over this track, the sea none too smooth, we did not stir much from our berths during the voyage, and were lucky in getting a two-berthed cabin on deck. We made a fairly good run, and should have reached Strahan before daylight on Sunday morning, but it being very foggy the captain was unable to pick up the lights at the entrance to the harbour, and had to stand off until daylight broke. On my previous visit in December, there were many thousands of mutton birds to be seen as we approached the Tasmanian coast, but on this occasion they were very scarce, the main body having apparently gone on their annual trip south.

Coming on deck early on Sunday morning, we were just entering the heads, which are known, and will doubtless be so until the end of time, as Hell's Gates, having been so christened by the unfortunate convicts. In those days it was clearly a case of "abandon hope," &c., but happily nothing but the name and a few piles of bricks and mortar on Settlement Island now remain to remind us of the horrible system so graphically described by Marcus Clark in his famous book. The morning was fine, and the scene a remarkably beautiful one. Right ahead was the entrance, so narrow that as we passed through, one could easily have thrown a stone on to the land on either side, with the two lighthouses in line, and the splendid harbour opening out to right and left. In front of us, as we enter, Mount Sorell rises some thousands of feet above us, and stretching away to the east and north we have a fine view of Mounts Darling, Huxley, Lyell, Dundas, Zeehan, Agnew, and Heemskirk with a passing glimpse of the Frenchman's Cap, the whole making an the sun rose tinting the splendid vegetation which everywhere descends to the water's edge, a very fine panorama indeed. The mountains in the clear morning air look very close, and are really only a short distance away, it being about 16 miles or less in a direct line to Lyell, and about the same to Zeehan, but the traveller finds out ere he finishes with them that they take many more and some very weary ones to reach by road. As we enter the harbour we are a little reminded of our own Port Phillip on a smaller scale by the narrow heads and immense expanse of water

inside, added to the rather intricate navigation, owing to the channels. In some places the one we follow is only about as wide as an ordinary street, and for some distance is within a stone's throw from the cliffs. We turn sharp to the right after passing the second lighthouse for about a couple of miles, and then gradually bear away to the left, guided by several small buoys and a number of beacons, visible enough in the daylight, but which cannot possibly be seen at night. These mark the channel, and, following them, we soon find ourselves alongside Strahan Wharf. As we cross the harbour, we see the entrance to the beautiful King River; while extending further than the eye can reach to the south is the harbour. In the dim distance we can just make out Settlement Island, and beyond that we are informed the Gordon River enters the harbour. This river, which is described by those who have seen it as one of the most beautiful of known rivers, is navigable for boats like the *Glenely* for many miles, and is a favourite resort of Zeehan and Lyell people on holiday, when the steamers run excursions.

Arrived at Strahan, we lose no time in making our way to the Palace Hotel, and forget our rough trip over a breakfast of delicious flounders, which grow to perfection in the harbour.

Before proceeding further, I must say a good word for the skippers who navigate these waters. Day or night, light or dark, as long as they can see the lights at the entrance they go straight into this and the other harbours on the coast, and the few accidents that have occurred are evidences of the care and skill they exercise. The navigation is very intricate, and to a layman appears very dangerous, but they take it as a matter of course, though how they find the narrow passages on a dark night is a source of wonder. It is a rough and anxious life, and deserving of better recognition as regards pay, &c., than they receive.

(To be continued.)

MEETINGS OF MINING COMPANIES.

THE HAURAKI (N.Z.) ASSOCIATED GOLD REEFS, LIMITED.

THE statutory general meeting of the shareholders in the Hauraki (N.Z.) Associated Gold Mines (Limited) was held on Monday, at Winchester House, C.E. the chair being occupied by Sir CHARLES CUNNINGHAME, Bart.

The SECRETARY (Mr. W. A. Luning) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—A beneficent legislature has made it imperative that the first general or statutory meeting of a company should be held within four months of its formation. We have accordingly called you together. But, gentlemen, as you are all aware, New Zealand—you know, of course, your property is in New Zealand—is a long way off. It takes six weeks before a letter from this side gets there, and six weeks to get an answer back, so you cannot do much by letter in four months. Of course, we can cable, and we do so frequently, but cables are expensive—they cost 5s. 2d. a word, or thereabouts. I merely mention this so that you may see that with the very best intentions you cannot expect much to have been done by the directors in time for the statutory meeting. However, we have not been idle. Immediately after allotment we procured the transfer to this company of our property, which is on the famous Tokata Hill. We also entered into communication with our local committee in New Zealand, and I am glad to say that we have been fortunate enough to secure as our local committee the services of Mr. Malcolm Nicol and of Mr. Porter, of Auckland. Mr. Malcolm Nicol is one of the most influential mining men in New Zealand, a gentleman who would not be connected with anything that was in any way likely to lead to failure, and which was not above board and straightforward. He is director of something like 25 local companies out there. Chairman of considerable number of them, and altogether a man much respected and of great influence. Mr. Porter, of Auckland, is also a well-known man in the colony, and is a partner of Mr. Hampson, the vendor. Mr. Hampson is here to-day, and will, with your permission, address you later on, and I cannot but think that it is a great feature of the confidence that Mr. Porter and Mr. Hampson, the vendors, gentlemen, have in this mine, when, after selling it to us, they do not run away, do not sever their connection with it, but are, on the contrary, helping us in every way to bring your property to what I really believe it will become—one of the best paying mines in New Zealand. I trust you will pardon me for this digression. Having secured the services of these gentlemen, we instructed them to take all necessary steps to protect the company's property and to take charge of its interests, and we have heard that this has been done most thoroughly and completely. Besides this, as you have all been advised by the secretary, your directors, acting on advice, have acquired an adjoining section of property known as the "Oriana Surplus." There it is on the map. This bit of land brings the property of the Hauraki Associated Reefs up to 80 acres, and should it be deemed desirable, it is proposed to form, in the near future, a subsidiary company. A certain amount of work has to be done on that section before a separate company could be formed, but your directors will not lose any opportunity, and I need hardly state that the value of the parent company's shares—your company—will be very considerably enhanced by such a flotation. We have also purchased right out and paid for in cash and got discount f., not much discount, but still a little, a complete mining plant, consisting of a 10 stamp battery, boilers, engine, &c., so arranged that it can be increased to 20 or 30 stamps at very little further expense. This mining plant we obtained from the well-known firm of Messrs. Bowes Scott and Western, which alone is sufficient to prove to you that every part of it is as good as it can be made; and, moreover, our consulting engineer, Mr. C. E. Hogg, has thoroughly gone into the matter, so that if possible not a bolt or rivet should be wrong. Gentlemen, we have not only purchased and paid for, but we have shipped this machinery, and we hope it will arrive in due course at the Port of Coromandel, which is only 3 miles from your property, and connected to it by a country road, not quite so good as an English country road, but still a road, so that it should be out on the mine in about two months from now. Now, gentlemen, I am going to "pat myself on the back." I have the honour of being a director on another New Zealand Mine, which is situated in the immediate proximity to your property, and which is in many respects on all fours with it. I allude to the Triumph Hauraki Mine. For this property its directors ordered and sent out precisely similar machinery to that ordered by your directors for your mine, so that the plans for putting up the machinery are exactly the same. Gentlemen, I obtained the permission of the Triumph directors, that we, the directors of this company, might use their plans, and they very courteously cabled out to their representative, Mr. Skrine, at Coromandel, instructing him to afford every facility to our local committee to inspect plans, specifications, and all such matters, and give them all the help he could; this has been done, with the result that our local committee has been enabled to get on with the foundations for the battery to be erected on. This has been a saving of nearly two months' time, so that when our machinery does get out it can be placed in position at once and proceed to crush immediately; by that time the workmen employed out there will have a considerable amount of ore, at grass as it is called, so that there is no reason why we should not begin to have returns of considerable amount by the end of this year. I trust, therefore, that you will give us credit for having done, at all events, something in the four months. And now, gentlemen, I must touch on the financial arrangements. Quite sufficient working capital was subscribed to warrant us going to allotment, and should more funds be required before the mine

begins to give returns, the same will be forthcoming from a powerful group of financiers, who are by far the largest shareholders in the mine, and whose interest must and always will be to bring the company up to the point of a large dividend-paying concern, so that you need be under no apprehension whatever as to that matter. It is not, perhaps, expedient to publish all details, but the secretary will give any shareholder, who asks him privately for it, all and every information he or she requires, about everything connected with the mine, its prospects and its finance. We do not want to hide anything from our shareholders. We are your servant, and we are simply here to carry on the work of the property—to bring it to a success, and if you give us our head a bit we will make it a success, for we have the wherewithal to do it—sufficient money and a splendid property. Now at the risk of being a bit tedious, I will, with your permission, tell you a little about the history of your property, and also read one or two extracts from the reports of well-known reliable experts as to its great value. To begin with, the reports of the country in which it is situated. Mr. Henry A. Gordon, the New Zealand Government Inspector of Mines, says in his annual report for last year, 1895, to the Houses of General Assembly, and referring to the Coromandel district:—"There is a highly auriferous belt of country from the Tokatea Hill to the Ocean Beach, going through Kapanga, Blagroves Freehold, and the ground now held by the Hauraki Company. No part of Coromandel district is more worthy of being prospected than Tokatea Hill. Quartz containing 6 ounces of gold to the lb. has repeatedly been found," i.e., 50 per cent. of the quartz is gold. The same report states, referring to the Tokatea District alone, that from 47 tons 4 cwt., 66 lbs. of quartz, 751 ounces of gold were obtained. Mr. George Wilson, Inspector of Mines, in his Government report for 1895 (*vide* Warden's report on New Zealand Gold Fields, chap. 3, page 4), addressed to the Under-Secretary of Mines, Wellington, New Zealand, referring to some of the mines by which this company's property is surrounded, says of the Tokatea Mine that "Tributaries crushed 11 tons 3 cwt., 373 lbs. of quartz for a yield of 99 ounces 16 dwts. of gold." Referring to the Royal Oak, "2 tons 905 lbs. of quartz and specimens were crushed for 340 ounces of gold." Referring to the Bismarck, "2 tons 15 cwt. of quartz yielded 54 ounces 15 dwts. of gold." So much for the extracts of reports as to the value and extraordinary richness of our immediate surroundings. Now, as to our own property. Before it was acquired by your company it has been worked at various periods, but in a most perfunctory manner, till lately, when the last owners, from whom the company took it, proved it to contain no less than 15 reefs or leads, mostly proved to be gold bearing, and nearly all exceedingly rich. More than 8000 ounces of gold, or about £32,000, have been taken from the surface workings alone in former times by common miners, working without any appliance, merely with pick and shovel. Gentlemen, what should we, with a bit of luck, get with all modern appliances? There is no doubt about the gold being there, and in large quantities. We have just had some specimens sent over, and though I do not hold much to specimens as a rule, and I also hope you do not think all your stone will turn out as rich, yet these specimens are so extraordinarily rich, I must tell you about them. As soon as they came to hand they were sent to the assayers to the Bank of England, Messrs. Johnson and Matthey, who found that they assayed 114 ounces of gold to the ton. Full particulars have already been sent to you by the secretary. These specimens, though, of course, picked, yet were taken out from a block of 4 tons, so that they are not isolated specimens. Gentlemen, there is no doubt of it, you have a fine property, a rich mine, and with a little patience, unless all our information is false, your investment will prove a most lucrative one. Now, gentlemen, it is usual to wind up by saying that the directors will be very happy to answer any questions, and so they are, but I think you had better ask Mr. Hampson, the vendor, the questions. He knows the country (every yard of it), the mine (every inch of it), and its probable prospects thoroughly. There he is. You can heckle him as much as you like, but I am sure that after you have heard him you will be satisfied, as the directors are, that you have first class property—one that you will never repent having secured shares in, and which will give large returns in the immediate future. Indeed, people are already finding out the possibilities of the company's property, as we see by the papers, that the shares are quoted at a substantial premium. Now, gentlemen, let me introduce Mr. Hampson to you, but, in doing so, let me tell you that neither he or his partner, or the vendor company, have received, nor will receive, one single penny piece in cash from us for the property, and though these vendors had to pay large sums in cash themselves to secure the property, yet so confident are they of its value that they have been content to take the whole of the purchase price from us in shares. Gentlemen, this fact speaks for itself. I need say no more, except to thank you for having listened to me so patiently. I beg to introduce to you, gentlemen, our esteemed friend, Mr. W. S. Hampson.

Mr. W. S. HAMPSON, of Auckland, New Zealand, then addressed the meeting: Mr. Chairman and Gentlemen—I have to thank you for the honour that you have done me in requesting that I should give my fellow shareholders a brief description of our property. Perhaps the easiest way will be to give you a short history of the claims that are now incorporated in your company. For some 20 years or more, the greater portion of the ground has been worked with varying success, and I may say, at times, with a very considerable amount of success. In conjunction with several of the surrounding claims, large quantities of the precious metal have been extracted from, practically, surface workings. The failure of New Zealand mines in the past has been largely due to the fact that the greater portion of the proceeds of the metal obtained has been paid away in dividends, leaving no reserve fund to be drawn upon for future developments, hence the reason that so many properties are being brought on the London market to-day. There is absolutely no question as to the enormous mineral wealth contained in these gold fields, and it only requires modern machinery and methods of systematic working to make it, I believe, one of if not the most productive field in the world. The position of your property is in the very centre, and at about the summit of the Tokatea range, which is well known (throughout the world) as a veritable network of gold reefs and leaders. So valuable is it considered to be by Mr. Gordon, the late mining expert to the Government, as you have already heard from your Chairman, that he suggested the advisability of putting the whole hill through the batteries, believing that it would pay so to do. The situation of these hills, and of your property in particular, is only a few miles from the well-known port of Coromandel. Our mines are, roughly, about 3½ to 4 miles from the harbour. The road leading from the town to the mines is an excellent one, and there are no costly difficulties connected with the transport of machinery. This efficiency places us in a position infinitely more favourable than a number of the mines in other parts of Australasia that to-day are dividend payers. Another important factor in the developments of gold fields is a plentiful supply of water, and here I would remark that we have nothing to fear in this direction, there being ample for reduction purposes. The property being high and worked by means of adit levels, there is no need for expensive pumping machinery, &c., the mine being drained by gravitation. In my opinion, there will be no difficulties with regard to water, until we are compelled to mine below the sea level. Now, the altitude of the Tokatea Hill—where your property is situated—is about 900 feet above the sea level, and if we strike down (say) 800 feet and find the same gold leaders and reefs, which we have every reason to believe we shall, seeing that adjoining properties have already been worked successfully 600 feet to 800 feet from the surface, I venture to predict that there will be so much gold-bearing stone available that the life of the mine will be by no means a short one. The Kapanga property, situated two miles from ours, have lately got rich gold-bearing stone 1000 feet below the sea level, and as the geological formation of the Kapanga is similar to ours, it is reasonable to infer that we can consider the gold-bearing reefs of our property will go down at least 1800 feet from the surface. Recently, several parties have been placed before the public in London, the reports of which, by most eminent men, entirely bear out the statements concerning the great value of the district in which our property is

situated, made in the prospectus. The lack of machinery to treat large quantities of ore in the past has led individual miners and local companies to become mere specimen hunters, and to pick only stone that would average 3 ounces to 7 ounces per ton, the result being that there are hundreds of tons of quartz lying about the Tokatea Hill that would average ½ to 1 ounce of gold per ton, if treated by modern machinery. As already stated to you, your property has been well opened up, and there are now three adit levels and a fourth one in course of progress. One of these levels is on the line of the Rainbow end reef, and is over 600 feet long. It is expected that upon this level we shall strike some very rich gold after driving another 60 or 80 feet. This should bring the drive under a winze in the upper level, from which some 6000 ounces of gold have been taken. This was some years ago, work being stopped at that time because of the water flooding the winze. Past experience would lead us to believe that we shall get gold as rich, if not richer, upon this lower level, and at the same time draw off the water from the winze above, so opening up a most valuable block of country. Your directors have shipped machinery that is well suited to the property, and as I expect to be on the ground by the time it arrives, I shall, of course, do all in my power to expedite its erection. And we may reasonably hope for regular crushings from our own battery to commence in October, provided nothing unforeseen occurs. You have already heard that we have secured an additional property for the company, making a total area of some 86 acres. This addition contains a valuable battery site and water right, in addition to several well-known reefs which are known to intersect it, notably the Tokatea reef, which reef has been worked in that company's ground to a depth of at least 600 feet, with most excellent results. In conclusion, I would state that I have only received shares for the vendor company's interest in the purchase; therefore, our interests are identical. You will see from what I have said, my belief in the property is so great that I had no hesitation in accepting such shares instead of cash; more than this, I do not think a vendor can do. I would also point out to you the fact that, in comparison with surrounding properties, the capitalisation of yours is decidedly moderate, and I have every faith that it will become one of the most valuable in the district, not to say one of the most valuable in Australasia.

The CHAIRMAN proposed a vote of thanks to Mr. Hampson for his interesting statement, which was seconded by Mr. VAN PRAAGH, and carried unanimously.

Mr. HAMPSON, in returning thanks, remarked that one of the vendors had such faith in the property that he had stuck to it through thick and thin for nine years.

Subsequently an extraordinary general meeting was held for the purpose of making alterations in the Articles of Association.

The necessary resolutions were passed, and the proceedings terminated with a vote of thanks to the Chairman.

HANNAN'S "EMPERESS" GOLD MINING AND DEVELOPMENT COMPANY, LIMITED.

The statutory meeting of the shareholders in Hannan's "Emperess" Gold Mining and Development Company (Limited) was held on Thursday, at Winchester House, E.C., Mr. R. J. PRICE, M.P., presiding.

The SECRETARY (Mr. Charles O. Greenwell) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This is, as you know, the statutory meeting, when no accounts will be presented or any report given you, but it is usual on such occasions for the Chairman to let the shareholders have the earliest possible information as to what has occurred on the property they have purchased. We went to allotment on March 31, and immediately that ceremony was concluded we took steps to get the property put into the name of the company. It has now been definitely transferred to us in the names of the trustees of the company. I think they are the solicitors, Messrs. Parker and Parker. Then we had to proceed to get proper management for the mine, for, of course, on proper local management the whole success of the enterprise depends, as we have reason to think that the property is an exceedingly good one. But even the best of properties fares badly with bad management, and therefore, I am glad to tell you that we have fortunately been able to secure the services of Mr. Vincent as our local superintendent. Then there is Mr. Cross, a very experienced underground man, who has been appointed underground manager. We shall also lose the services of Mr. Wills on this side—he is now acting as one of the ordinary directors here—but with him we shall have a very experienced local director on the field. By this means we shall not only have good underground management, but also a first-rate superintendent, for we shall have a local officer who has had an exceedingly good and very well-deserved reputation on the fields, not only of West Australia, but also South Africa as well. Having arranged for a good local management, we have consulted as to what machinery would be necessary to enable the mines to be properly developed. As you are aware, we have a very large property. It consists of four claims of no less than 96 acres, and the hope was held out in the prospectus that we might sell a portion, which would not only be profitable but also advantageous to you. Consequently our object is to develop the property as rapidly as possible, in order to see exactly what the mines contain, and to enable us to make a reasonable and honest sale to any company which was in a position to purchase the portion we might offer. Well, the developments have gone on, I am glad to tell you, very satisfactorily, and we have sent out, with a view to expedite matters, hauling and winding machinery, and a pump in order to deal with the water which, we are pleased to say, is within reasonable distance from the surface. In point of fact, on lease 1466 the water level is 74 feet, and on lease 1601, 94 feet from the surface. You will see, therefore, we have got a property here which is not in the ordinary position of properties of this age—that is to say, it is very much more developed, and Mr. Wills, who will be our local director when he goes out, is quite surprised at the amount in value of the development work that has been done. In fact, so much so that he has advised us not to wait, as we thought, any longer before sending out not only a trial crushing plant, but a crushing plant able to treat considerable quantity of ore. He advises us to adopt some crushing plant, and send it out immediately, and I think it very likely that this will be done at once. Now, the developments have from time to time been published in the newspapers, but as there are some shareholders who may not have kept all this information in their heads, I will tell you what has been done. On lease 1601 we have a shaft 94 feet deep, and there are crosscuts amounting altogether to 73 feet. On lease 1468 there are two shafts; one of them is 94 feet in depth and the other 84 feet in depth, and there is also an open cut. In addition a great deal of crosscutting has been done, and water was found at 70 feet. Then on lease 1467 there are two shafts, one of which is down 69 feet and the other 76 feet, and a considerable amount of crosscutting has been done. The distances are 34 feet from the shaft, 69 feet deep, and 76 feet from the other. On the 1466 lease, as I have already said, the shaft is 74 feet deep, and about 94 feet of crosscutting has been done. So you see a great deal of work has been carried out. We have to deal, fortunately, not with a 3 feet lode or a 6 inch one—the class of lode which, unfortunately, many companies have to put up with—but with a lode which in places is 50 feet and even 80 feet wide. We do not say it is payable throughout, but still a considerable portion will be, and Mr. Wills makes the calculation, on which the prospectus is based, that he thought it likely that they would find 20 feet of the lode of a payable nature. If that is a fact, and, of course, it seems that there is every reason to expect as much, there is no doubt about it that there must be an enormous quantity of ore, and not only have we valuable mines but permanent ones as well. The recent developments have been very satisfactory, as I have told you, but we cannot give you exact details for the reason

that the assay plant has not yet arrived, and Mr. Vincent has not chosen to commit himself to assays without the proper means of making them. But he evidently thinks that it is very valuable ore. He reports in a very cut-and-dried way as to the amount of developments, and informs us that gold is visible in certain parts, and that the gold was obtained from dollying in other parts, from which we conclude there must be a good deal of gold in the ore. The recent developments in the neighbouring properties make us feel pretty certain that we have got a very good thing. In the Royal Boulder they have had some very good discoveries, and only the other day Mr. George Gray, who is a very eminent authority, as most of you know, reported on lease 1178. This does not belong to us, but in all probability the lodes which go through the Russell (that is the name of the property) go through our property, because the trend is in that direction. On the Russell there have been very excellent developments, and Mr. Gray writes that he does not hesitate in saying that he is convinced there is a brilliant future before the company—a future not exceeded by any other thing he knows of on the field. There are 12 feet of lode formation equal in appearance to anything that can be seen on the field. That report is telegraphed by Mr. Saunders. Well, our opinion is that what has been found on the Russell will be found on our property, and, consequently, although we do not want to be too sanguine, I do not think there is any reason to believe that the company is not destined to have a very prosperous future. As regards the water, I have told you that we met it at a reasonable depth, and we have made provision for a distilling plant, which will enable us to avoid paying 6d. a gallon for water for the men. In addition we hope to have a balance, which we shall be able to sell at 6d. a gallon. We have also sent out a saw bench, which will make it a good deal cheaper to procure timber for all mine purposes. In fact, I do not think we have omitted to do anything we ought to have done in that way. When we send out the crushing plant we shall publish the news in the newspaper, and I hope from time to time, although I suppose we shall only have an annual meeting, to give the shareholders information by circular as to what is going on. There are a certain number of shareholders who do not happen to see the particular financial papers in which the news is published, and, therefore, it is only fair that they should be advised from time to time as to the progress made on the property. I do not know that I have any thing further to say to you. I think our prospects are good, and I hope by the next time we meet I shall be able to point to some results we have definitely achieved. (Applause.)

Replying to a SHAREHOLDER, the CHAIRMAN said £15,000 of the capital of the company were reserved.

Mr. GREENWOOD thought they had had a very satisfactory statement made to them, and were justified in anticipating a prosperous future for the company. He always thought it would be a good property, and it was very pleasant to hear his view confirmed. But one thing he wished to call attention to was that with such a large acreage their labour obligations were very considerable—the minimum amount to be spent per week was no less than £128. Taking the amount of working capital into consideration, in order to comply with these regulations, he thought very genuine economy must be exercised both in London and Australia. In Mr. Wills, who was going out to supervise the affairs on the property, he had the greatest confidence, but at the same time it was necessary that the utmost economy should be practised. He regretted to see that by the Articles of Association the Chairman was entitled to £250 a year, and the other directors to £200 each. Moreover, they were entitled to 5 per cent. of the profits after dividing 10 per cent. among the shareholders. To that 5 per cent, he thought they were fully entitled, but he did not think the £200 a year was warranted until the company was in dividend-paying position. In addition, he noticed that there were five directors, exclusive of the managing director in Australia.

The CHAIRMAN said it was very unusual that at the statutory meeting of a company the directors' fees should be criticised. As to working the 96 acres, he believed that as soon as the market realised the value of their property, they would have no difficulty in making an advantageous sale of a portion of it. Mr. Greenwood's remarks as to the directors' fees would be borne in mind, but he was quite sure no member of the board would agree to take the money if the shareholders were not getting a return.

A vote of thanks to the Chairman concluded the meeting.

MENZIES GOLD DEVELOPMENT, LIMITED.

The first ordinary general (statutory) meeting of the Menzies Gold Development Company (Limited) was held on Wednesday, at Winchester House, Old Broad-street, E.C.—The Hon. J. H. H. BERKELEY (the Chairman of the company) presided.

The SECRETARY (Mr. A. C. Adamson) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This is the statutory meeting, which every limited company is obliged by the Companies Acts to hold within four months of its incorporation, and as this company was registered on April 18, the meeting had to be held about this date. The company completed its allotment of shares on April 29, with a subscribed working capital of £25,000, as was mentioned in the prospectus would be the case, and there are 25,000 £1 shares still available for future issue for further working capital if required. Under agreements which were made, the property had to be worked by the vendors until the transfer to this company, but we got a telegram a few days ago informing us that the property had been transferred to us. You will understand, gentlemen, that, owing to the very short time that has taken place since the property came under our direct charge, we are not able to give you such full details as to what has been done on the mine as we should have been able to do under ordinary circumstances, but you may be assured that the work that has been done since the formation of the company was carried on under good direction, considering it was under the immediate supervision of the representative of Messrs. Bewick, Moreing, and Co., in Australia for first part of the time, and latterly under that of Mr. Florence O'Driscoll's representative. You will remember that at the time the property, which consists of seven leases altogether, containing about 95 acres, was offered to the public, a large amount of work had been done on the various leases than has generally been the case with other West Australian mines which have been offered. There were then nine shafts sunk to considerable depths, namely:—On block No. 3050 (Shirkin) three shafts had been sunk—No. 1 24 feet, No. 2 87 feet, No. 3 75 feet—and had proved a very large formation of 5 feet in width. Numerous samples had been taken from the various levels, which gave satisfactory results of from 3 to over 6 ounces of gold per ton. On block No. 3051 (Fineen) a shaft had been sunk 179 feet; on block No. 3055 (Banty) shafts and crosscuts, 427 feet; on No. 1421 (Lady Shenton North) into which it is believed that the Florence reef should run directly, drives and crosscuts of 300 feet have been made. Numerous samples have been taken from this lease, which gave most satisfactory results, of from half an ounce to over 8 ounces per ton. On block 3056 (Otho) a shaft was down some distance. On block 1423 (Florence North) the shaft and crosscuts 299 feet, and on block 1424 (Pericles) the shaft was 103 feet. Work has since been vigorously prosecuted, and we have sent out for the month of July the sum of £1200, and our representative there tells us he proposes a monthly expenditure of about £800 per month, so you will see that we have been and are energetically proceeding with the development of the mine. I would draw your particular attention to the position of our property. You will know that it is close to the celebrated Friday reef and the celebrated Florence Mine, as well as near to the equally celebrated Lady Shenton, and we have the opinion of the best experts that the reefs of these mines which I have mentioned must pass through our property at various points. To give you some idea of the value of our properties in the eyes of others, I may mention to you that, amongst others, the Menzies United Mines have some property close to us, and in a report which they recently issued to their shareholders was this paragraph:—"To the south of

the Balkis lease lies the Lady Shenton North lease (that is one of our 12 acre leases), and Mr. Sheridan (who is their manager) reports that from a shaft in this lease some very good stone has been struck, assaying, he was informed, as high as 21 ounces to the ton; and they continued to say that the reefs run through the Lady Shenton North into their property; and Mr. Sheridan further on in the same report says:—"We are undoubtedly in a good neighbourhood, rich gold being got in the Lady Shenton and Lady Shenton North." This is undoubtedly good testimony of the value placed upon your property by outsiders. You are aware of the great advantage we possess in having such a good supply of water on our Fineen lease, and I may say to you that we have been approached with a view to arrangement; being made for giving us the benefit of crushing machinery in return for the use of some of our water. If some such arrangement can be come to, it will be, no doubt, an advantageous one, as it will enable us to defer the erection of machinery on our claims for some little time—that is, till the completion of the railway to Menzies, when the freight will be very much less than it is now. We are told that the cost hitherto of getting the machinery up to Menzies has been almost as high as £40 per ton, whereas later on, when the railway is completed, it probably will not be more than £6 or £8 per ton, and we shall go on meanwhile with development work, as we are at present doing. I think that probably there can be no better guide to the value of the properties we have than by referring you to yesterday's quotations of the shares of some of the mines immediately adjoining and surrounding us:—Florence, 14s 2d; Lady Shenton, 2s 3d; Menzies Gold Estates, 13s 16s 15s 16s; Menzies Gold Mines, 1s 16s 5s 16s; Menzies Gold reefs, 1s 7s 16s 9s 16s ex-div. Menzies Cross, 1s 8s. We are told that a recent crushing of Lady Shenton gave some 260 ounces for 55 tons, and that there remain 2 ounces 5 dwts. in the tailings. It is this reef of which Mr. Thompson says our "Pericles" and "Lady Shenton North" are directly on the line. Now, these mines are all round our property, and as a telegram later received by the British Australasian says:—"The Menzies Gold Development are vigorously prospecting their seven leases. There are strong indications that extensions of the Friday, Lady Shenton, Florence, and other well-known lines of reefs will be struck." This confirms what Mr. William Thompson, the late State Mineralogist of Queensland reported, that leases 1411 and 1424 (that is our Lady Shenton and Pericles leases) are directly on the line of the Lady Shenton reef, whilst 1423 (that is our Florence North) is on the line of the Friday reef. I think it is safe to predict that in the course of a very short time you will find your shares also at a premium. We undoubtedly have a very valuable property, considered by most experts as good as any in the Menzies district. You may rely upon it that your directors, while anxious to develop your mines as rapidly as they can, will be careful to see you get full value for the money spent on them, and that every possible economy will be practised, and we shall endeavour to keep you fully informed with regard to everything that is going on at the mines. As you know, this is the statutory meeting, and only an informal statement can be made, but if shareholders like to ask any questions I and my co-directors will do our best to answer them. (Applause.)

Mr. T. H. NORTH: I should like to make one remark. I think you said in your speech that you were spending £800 per month on the up-keep of the property. If that be so I should, as a shareholder, like to urge upon you not to be too profuse in your expenditure until you know how the mine is going to turn out. I do not think it would be worth while to spend more money at present than absolutely requires, because you may want money for future developments when machinery has been erected.

The CHAIRMAN: I am glad, very glad, to listen to the remarks that have fallen from a practical man, and I do not know that I can answer his views better than repeat what I said before—namely, "That every possible economy will be practised." Ours is a large mine, and the labour conditions alone compel us to spend no less than £400 per month, and we have every reason to believe that £800 will not be too much to spend on developments.

Mr. T. H. NORTH thought that it might be possible to amalgamate the leases in order to save labour costs until they knew what they were doing. He was sure the directors would take his suggestion kindly, and in his opinion some of the 95 acres might be rolled into one to effect a saving. He was sure the shareholders might safely leave matters in the hands of the directors and wished to express himself as quite satisfied. In conclusion, he proposed a cordial vote of thanks to the Chairman for taking the chair on that occasion, and also to the other directors.

Mr. R. R. DOUGLAS seconded the motion, which was carried unanimously.

The CHAIRMAN, in reply, said that the suggestion thrown out by the shareholders had already been considered. Any steps that they would take with regard to the development of the mine would be done with the fullest and most careful judgment of the directors and their consulting engineers, Messrs. Bawick, Moreing, and Co., a firm second to none in England. (Applause.) He thanked the shareholders for the compliment, and assured them that the management of the mine would receive the greatest care. (Applause.)

The proceedings then terminated.

LONDONDERRY GOLD MINE, LIMITED.

An extraordinary general meeting of the members of the Londonderry Gold Mine (Limited) was held on Wednesday, at Cannon-street Hotel, E.C., under the presidency of Lord FINGALL (the Chairman of the company).

The SECRETARY (Mr. Acheson Irwin) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—I think the first point which I would like to mention to-day is our extreme regret at the loss of our late Chairman. Col. North was a man whom we all respected. We may have differed from him on details; but he had the welfare of this company, and of all other companies, I believe, thoroughly at heart. I think we have sustained a great loss by his death, and I feel extremely sorry that I am obliged to stand in his shoes here to-day. You have all received and read the report, which we have thought right to send out to you. Letters have appeared in the public press from time to time rather abusing the directors for secrecy. The principal reason why they did not publish particulars was that they had nothing of a satisfactory nature to publish. A year has passed since our last meeting, and I am very sorry to say, as you see from the report, that things are not in a very satisfactory state out at the mine. Roughly speaking, we have got about £6000 worth of gold out of it. We are down 245 feet. There are altogether 700 feet of shafts. The main shaft is down to 145 feet, and there are other shafts which make it up to 700 feet. There are drives to the extent of about 1000 feet, and there are minor works about 300 feet in extent. Well, out of all this we have only got £6000 worth of gold, which is not very encouraging. You see from the report what Messrs. John Taylor and Sons say about the mine, and it remains with you to decide on your future course of action. Of course, we have thought the matter over very seriously, and we know what we propose to advise you to do, but we do not want to influence you in any way beyond giving you our opinions. We want to invite free and open discussion here, and if anybody thinks another course preferable I hope he will say so. Our opinion, based upon that of our consulting engineers, is that we should sink to 300 feet—possibly to 400 feet. That will be decided when we have got to the 300 feet level. I am afraid that we cannot say the promises are very encouraging, but I think they justify us in carrying out this course. That is for you to decide. Dealing with that point, we sent the following cable to Mr. Black, our superintendent, on July 16:—"Telegraph as soon as possible depth of shaft at present time; the approximate expenditure; time to sink to the 300 feet and 400 feet level." We received from him a cable, dated July 19, to this effect:—"Depth attained to date 245 feet; will take three months to reach the 300 feet level; estimated cost £1500. Provided you intend to continue sinking further, we will require more powerful machinery, also pumping engine, machine rock drill." You see he estimates the cost at £1500 to get down to the

300 feet level, and if we are going any deeper it is going to cost us more money. I have told you what we directors think; presently it will be for you to say what you think. There is another principal point which we are called here to discuss to-day; that is, the outside blocks. You see from the report what work has been done on them, and what the opinions are with regard to them. Up to the present time we have been able to obtain exemption on them. I suppose you know what I mean by exemption. The law of Western Australia obliges you to have so many men per acre on your property. Failing this somebody else may take possession of it unless you get exemption. Up to this time we have had exemption, but I am not quite sure whether our manager out there has been able to obtain further exemption. According to the last letter from him he was trying to do so, but he was very doubtful about it, and we shall ask you presently whether you consider it worth our while paying £200 a week to keep those blocks going, because that is what we should have to pay if we fail to get exemption. The directors' opinion is that it is not worth while retaining them, and we would like to ask your sanction, if we cannot get exemption, to abandon these blocks, with the exception of a portion of the West Londonderry. We wish to retain that portion, because, supposing the reef in the main lease should become valuable at a lower depth, it may dip into this West Londonderry. The directors also wish to consult you, and to take your opinion as to employing a certain amount of the working capital which remains to us for the purchase of other properties. Roughly speaking, we have about £30,000 remaining—not quite that; some money had to be sent out the other day, but it is very nearly that amount. We would like to ask the sanction of this meeting to expand, if the directors see fit, (say) £15,000, on acquiring outside properties. This would practically mean turning the Londonderry Company into a parent company such as the Exploration and Finance. (Applause.) Now, gentlemen, as I said in opening my remarks to you, sometimes Colonel North and others of us differed upon details. We all had the same object in view, but we differed upon the means of attaining that object. The Colonel's opinion was that we ought to fight the gentlemen from whom we purchased the property in Australia about the non-issue of shares to them, about a sum of £30,000 which was locked up in West Australia. You all know about it, therefore I won't trouble you with the details. The Colonel's opinion was that these moneys and shares should not be relinquished to them quietly; others of us held a different opinion. We thought we had absolutely no ground for holding out against them. We hoped that they would have met us in a more liberal spirit, but we recognised that they were within their rights, and were only claiming their rights, and that fighting them was a waste of time. We took legal advice on the subject, and we came to this opinion after very mature consideration. There was a certain £30,000 which, we all know, was locked up pending the decision on the shortage of acreage. That money they have got now. Since the Colonel's death we have issued the shares to them. Now, I think I have dealt with the principal points, but there are one or two minor matters which I should like to lay before you. Our office expenses in London have been rather heavy up to the present; we intend reducing them. Several of the directors, for various reasons, have been obliged to resign. Two other gentlemen have very generously come forward and joined the board. Up to this none of the directors has ever received any remuneration. As far as Mr. Myring and myself go, I think that is perfectly right. We started with the company, and we want to see it through—(applause)—but I do not think it is fair to the other gentlemen who have come on simply to look after your business, to ask them to do so without remuneration. We want to ask one or two other gentlemen to join the board, and I just wish to tell you now that it is the opinion of the directors that these gentlemen should receive some return for their services. The next point, as far as I can see, that requires any comment from me is the return of the promoters' profits. You see in the report the letter which we wrote to Colonel North's executors and the reply they have sent to us. I think these two letters speak for themselves. You must remember that in discussing this question of promoters' profits, it is not, strictly speaking, a company business at all. The profits were not to be returned to the Australian vendors, nor to Mr. Casey if we could help it. Therefore, it is not strictly a company business. It is a matter for discussion amongst what I would call the English shareholders, so we cannot exactly discuss the details of it at a general meeting such as this. I believe everybody here is an English shareholder. I do not think there are present any representatives of Mr. Casey or of the Australian shareholders, but we must formally dissolve this meeting before we go into details of this particular matter. What Mr. Myring and myself intend to do we will fully explain to you when the general meeting is dissolved and when we come to the discussion of these points. (Applause.) Now, gentlemen, I have laid everything briefly before you, and I think the best thing I can do now is to ask Mr. John Taylor to substantiate what I have said upon the matter of the outside leases, &c. (Applause.)

Mr. JOHN TAYLOR: I do not know, gentlemen, that I can add very much to the information which is given you in the report of the directors, and in the letter from my firm commenting upon the condition of the mining work, and saying what we think ought to be done. The exploratory work carried on so far has, as you are aware, failed to prove the existence of any pocket of gold at all resembling that which was found near the surface in what has been called the Golden Hole, but the gold-bearing rock in which the gold deposit was found exists in the nature of a chimney. It is described by your agents out there as a chimney, or what some companies call a pay-shoot, and that has been proved now to extend from the so-called Golden Hole, near the surface, down to a depth of 200 feet in the level which is driven 200 feet from the bottom of the main shaft. Following that down in the 70 feet level south from that shaft good specimens were found—specimens rich in gold—and a rich patch was taken out in a winze sunk below that 70 feet level down to the 100 feet level. Again, in that 100 feet level, at a short distance—I think about 35 feet—south from the shaft, another rich pocket was met with, and specimens described by your agents on the spot taken from that point are said to be almost equal to those found close to the surface. That pocket proved to be only about 7 feet or 8 feet long, and it suddenly came to an end; but again at a deeper point in the 200 feet level, 88 feet south from the shaft, the reef widened to about 3 feet, and is described as containing heavy gold. This is important, because it shows the uniform dip of this pay shoot traceable from the surface down to this deepest point. I am not going to say that the prospects here are very bright. Probably they are not; but it appears to me where such extraordinary wealth has been found within so very small a space; and, in view of this reef being apparently a permanent one—by that I mean the reef itself, not the gold-bearing portion of it—the reef itself being apparently a permanent one, and likely to hold in depth, I cannot but consider that it is advisable to give this property further exploration before thinking of abandoning it. The developments which have already been carried out cannot for a moment be said to constitute an exhaustive exploration of the reef, and, in my opinion, the main shaft should be sunk at least 100 feet below the 200 feet level, which is already, as you have been informed by the Chairman, down about 45 feet out of that 100 feet, and in a couple of months' time, or thereabout, we may expect to hear that that shaft should even be sunk another 100 feet, and I think that from the shaft levels should be driven at a depth of 300 feet and 400 feet for a considerable distance, notably south, perhaps 200 feet or 300 feet. You have these facts to keep before you: That the reef at one point has been phenomenally rich. Probably a richer pocket of gold or as rich a pocket of gold has seldom been found anywhere on the face of the earth. In the early days of California near the surface probably as rich pockets were found; but we all know what the result of following up the reefs in California has been. You have again here the fact of the continuity of the reef itself down to a depth of 200 feet; and, I suppose, laterally about 300 feet. I think that the 100 feet level must have been driven about 300 feet on the course of the reef.

It would certainly, in my opinion, be the right thing to give the property a further trial. (Applause.)

The CHAIRMAN then moved the following resolutions:—(1) "This meeting approves the report of the directors, and authorises them to abandon forthwith, at their discretion, all the seven outside blocks, except the West Londonderry, or so much of it as will bring the acreage of the Londonderry leases up to 25 acres, the work upon the Londonderry to be continued to a depth of 400 feet by sinking and driving levels, and all requisite expenditure on appliances and plant to be incurred." (2) "This meeting approves of the directors expending the remaining capital, or part of it, in acquiring other properties, options, or interests in properties in any part of Australasia, with a view either of working them or exploring and reselling them, and promoting, if necessary, other companies for their purchase."

Mr. W. WOOD seconded the resolution.

Eventually the following amended resolutions were carried unanimously:—(1) "This meeting approves the report of the directors, and authorises them to abandon, at their discretion, all the seven outside blocks, except the West Londonderry, or so much of it as will bring the acreage of the Londonderry leases up to 25 acres." (2) "The directors are authorised to continue work upon the Londonderry by sinking and driving levels to such depth as they think desirable, and all requisite expenditure on appliances and plant to be incurred." (3) "This meeting approves of the directors expending the remaining capital, or part of it, in acquiring other properties, options, or interests in properties in any part of Australasia with a view either of working them or exploring and reselling them, and promoting, if necessary, other companies for their purchase."

It was also resolved that the members of the board and Mr. Biddle should constitute a committee to consult with the executors as to taking action with regard to Colonel North's trust.

WEST FRANCES.

A meeting of West Frances adventurers was held on the mine on Wednesday, the PURSER (Mr. W. Pike, J.P.), presiding.

The accounts for six months showed a loss of £390, increasing the balance against the mine to £913. Labour costs amounted to £25,556; merchants' bills, £1378; rates, £56; bank charges (12 months), £10; making the six months' costs, £101. The other side showed that 91 tons 17 cwt. 1 qr. 15 lbs. of black tin realised £3089; extra carriage, £15; discount, £6.

Captain JOSIAH THOMAS stated that with the exception of two or three tribute pitches, they had done nothing of late in the eastern portion of the sett beyond working Bailey's engine to pump sufficient water for dressing purposes. In the western portion the 75 level had been driven 17 fathoms west of new shaft. The lode had produced tin stuff of low quality, but showed signs of improvement. The present end was worth £8 per fathom. Some tin ground of better quality was being worked by tributaries above the 104 farther west, so that they might reasonably expect a further improvement in the 75. About 40 men were working on tribute, and even with the very low price of tin the mine for the past two months had been nearly paying costs.

The PURSER submitted the report of the committee of management, which stated that after the meeting on February 6, when a resolution was passed to wind up the affairs of the company, the pumping engines were stopped and the water allowed to rise. But on representations being made to the lord's agent that this course was injurious to the neighbouring mine, the water was pumped out to enable Wheal Grenville to build a dam at the 174 to protect them from the eastern water. Negotiations were then commenced with a view to disposing of the western part of the sett to Wheal Grenville, and several meetings between the executives of the two mines took place. Eventually £600 was suggested on behalf of Wheal Grenville, but West Frances committee did not feel justified in recommending the acceptance of this sum. On June 30, the secretary of Wheal Grenville wrote that the committee had decided not to purchase, and it was for the present meeting to consider the course to be adopted. At the date of the last meeting one month's costs had been incurred, and the work of pumping out the water entailed another month's full working, resulting in a loss of £741 for the two months. The loss for four subsequent months was only £127, and at the present time the mine was practically paying its way, the last two months showing a debit balance of £23 only.

Mr. PIKE remarked that they had now a mine practically paying its costs, and the prospects in Crass's tenement were better than for a long time. As the mine was still in liquidation they should ask for a resolution that day to carry on the mine as at present, or open negotiations for amalgamation or sale. They could now, if they liked, sit tight, and whilst losing no money, provide work for a large number of hands. The mine was being worked with the strictest economy, the total cost of the whole management being only £21 per month.

On the motion of the CHAIRMAN, seconded by Mr. JAMES WICKETT, a call of 4s. per share was made.

The CHAIRMAN observing that there were 5006 shares upon which the call could be made, as no one could relinquish now.

Mr. JAMES WICKETT moved, and Mr. W. H. BUNT seconded, the adoption of the committee's report, and that the committee be authorised to continue or open negotiations for the sale of the mine by amalgamation or otherwise, and meanwhile to continue the working of the mine.

The motion was carried.

CENTRAL DE KAAP GOLD MINES (LIMITED).

The ordinary general meeting of the shareholders in the Central De Kaap Gold Mines (Limited) was held on Tuesday, at Winchester House, E.C., when the Chairman (Mr. William Longfellow), in moving the adoption of the report and accounts, said during the year under review they had not been affected by the political disturbances. The manager had from time to time reported very favourably on the progress made with the development of the mine, and in April last he wrote that he considered he had from 20,000 to 25,000 tons of ore ready for stamping. This would mean a sufficient quantity to keep a 10 stamp mill going for four years. He was of opinion that when the machinery was erected the shareholders would receive good dividends. In regard to the financial position of the company, in order to provide the necessary machinery, the remaining half of the £15,000 working capital would be called up, and another £10,000 issued. Of the new issue every shareholder would be entitled to subscribe for one new share in proportion to every six of his present holding. In the event of some of the shareholders not wishing to subscribe, the board would be prepared amongst themselves to take up 5000.—Mr. G. Whitfield was seconded the resolution, and it was carried.—Mr. Wm. Lonsdale was re-elected a director, and Mr. Frank Turner auditor, the meeting terminating with a vote of thanks to the Chairman.

GOLD ESTATES (TRANSVAAL) COMPANY (LIMITED).
The first general (or statutory) meeting of shareholders in this company was held at the Cannon-street Hotel, London, E.C., on Wednesday last.—Mr. Alexander Davidson, who presided, said that the company was a reconstruction of the old company, whose assets and liabilities they had taken over. The 70,052 fully-paid shares in the old Gold Estates Company, in the proportion of one new share for every two old shares. The property the company had taken over consisted of 43,000 acres in the Lydenburg division of the Transvaal, mostly in the De Kaap district, and 10,700 acres in the Waterberg district. They had also taken over various interests in several promising concerns, which it was thought would turn out well. As regards the other properties of the company, the directors hoped that the tide of revival which had spread itself slowly over the districts in which they were situated would long enable them to obtain advantageous results. Like those of other companies, their proceedings had been hampered during the last six months by the political difficulties in the Transvaal, but they could at least congratulate themselves on the fact that they had not gone back, but had made some profits.

NEWPORT ABERCARN BLACK VEIN STEAM COAL COMPANY, LIMITED.

The 24th ordinary general meeting of the shareholders in the Newport Abercarn Black Vein Steam Coal Company (Limited) was held on Wednesday, at the offices of the company, No. 12, St. Mary Axe, E.C., Mr. WILLIAM ALDWIN SOAMES (Chairman) presiding.

The SECRETARY (Mr. Arthur R. Mollett) read the notice convening the meeting, and also the reports of the manager (Mr. Wallace) and the engineer (Mr. Evans).

The CHAIRMAN said: Gentlemen—You have heard the very exhaustive reports of the manager (Mr. Wallace) and the engineer (Mr. Evans). In these you have had a great many figures given about the coal and the cost of working the colliery, so that it does not leave me very much to say. The output for the year was 440,142 tons, which is a decrease of 9500 on the output of the previous year. The amount of coke manufactured, as you will see in the directors' report, was 13,990 tons; in the previous year we manufactured 25,450 tons, and I think some explanation ought to be given as to the cause in this large falling off. We have about 100 coke ovens, 54 of the "beehive" pattern, and 48 "Coppice" ovens. The Coppice ovens have proved very expensive, as they constantly need repairing, and a year ago it was decided to abandon them. Since that time, therefore, the company have not had many ovens available for their use, but we propose to pull down the Coppice ovens, and rebuild beehive ovens in their place. That has not been done up to the present, because we have not had the cash available for that purpose, and the result is that we are now working with only 54 beehive ovens. You will see that in the present accounts the working account has been debited with the whole of the expenditure on works of a permanent nature, and nothing has been charged to the capital account. This was done in consequence of the decision of the directors, which was put before you at our last annual meeting. Of course, this alteration makes the working account rather heavier than it would otherwise have been. The colliery was idle for six days in August in consequence of a dispute with the colliers. It was not a very important matter, but they wanted a quarter of an hour additional time to get to the workings. Our manager did not think it wise to concede this point, so we withdrew it, and at the end of six days the men resumed work. That, however, accounts for a small loss. The next paragraph in the report, which has been carefully drawn up, states that the unsatisfactory result of the year's working is due to the four reasons set out. The first is the exceptional depression in the South Wales coal trade. No doubt everybody who is cognisant of all with the coal trade know that the 12 months under review have not been by any means pleasant months for the proprietors of collieries. Even those who are not cognisant of the coal trade must have seen by the reports in the daily papers that there have been endless difficulties in the way to prevent collieries working at a profit. The next point referred to in the report is the low price of coal. The price has been very much lower than during the previous year. What we have realised is 1s. 7d. a ton less than in the previous year, which is a very serious matter. But I may say that if last year we had not had the very serious troubles with the "squeeze," and the changes in the management—we had many managers in the course of the 12 months—we most probably should have been able last year to pay you a satisfactory dividend. Another reason is that we have had to spend money in proving the faults. There is a fault which runs right across the colliery, and this has and will entail considerable cost, because we have to get through this hard rock before we can work the coal on the other side. This matter is alluded to in the manager's report. The loss shown in the balance-sheet was principally sustained during the first nine months of the year. During the last three months we have practically been working the colliery without making a profit or a loss, which, compared with the previous months, is satisfactory. I think, if you will turn to the working account, I would like to draw your attention to a few of the figures. The royalty and wayleave is about the same as in the previous year, but the wages are very much less, being only £107,830, as compared with £125,000 on the preceding 12 months. This is a decrease of over £17,000, and is partly due to the sliding scale, under which, as you know, the wages go down when the price of coal falls, and go up when the price increases. But that is not the only reason. Our manager exercises considerable ability, and devotes much attention to the reduction of the cost of working, and it is greatly due to his foresight and management that we can show you such a satisfactory decrease in the wages. The amount expended on pitwood and other materials and tram rope and stable accounts is difficult to compare with the previous year, because there was then a mining account, to which some of these expenses used to be charged. In the shipping and agency charges, the railway carriage is about £700 more, and this is accounted for by the fact that we have been shipping considerably more coal at Cardiff than we have hitherto done. The dock charges are about the same. As to the agency charge they are considerably lower, because they are regulated by the amount realised by the sale of the coal, and as we have realised nearly £40,000 less than last year the amount is reduced in proportion. The next item worthy of notice is the directors' fees, which have dropped 50 per cent., and I am sure you will not object to that. We have only drawn half our fees—that is, £650 instead of £1300. We have placed the usual amount to the credit of repairs, renewals, and depreciation—£2600. This, we think, is necessary to meet the expense of repairs to the machinery and plant, and so we have not altered it. The last item is a new one on the working account—it is the expenditure on corn stores, hauling engine, and increase of siding, £936. We have hitherto charged such matters as these, being of a permanent nature, to the permanent account, or to the mine account, and spread the payment over several years; but we are now debarred from doing that, and, therefore, the whole amount has to be written off this year. The cottage account is nearly a *fae simile* of the one put before you during the last two years, and does not call for any remark. The profit and loss account contains the disagreeable item of £10,903, but we did not think it wise to start the next year with such a heavy balance standing to the debit of the account, as it might prevent us paying a dividend, and, therefore, we thought it better to write it off the reserve account. This, as you will see, has been done, reducing the reserve from £25,950 to £15,047. So next year we start with a clean profit and loss sheet, and hope to be in a position to pay a dividend, which is a matter I may allude to a little later on. The mortgages on the cottages have been reduced by about £2000. This we are bound to do, as the building loans are repayable, capital and interest, by yearly instalments, but it improves our position to that extent. The sundry creditors, of course, must be very unsatisfactory as we have sustained such a loss on the year's working, but this has been considerably reduced by the money we have received from the debentures, and by the sum of £10,000 which we borrowed from a trust company on the security of £15,000 of the debentures. We had for this accommodation to pay a commission and a certain interest, which came to 7d per cent. altogether. You have only yourselves to thank for this debt being incurred. We had to raise the money, but only a few shareholders, so far, have come forward and taken up debentures. You as shareholders are much more interested in the company than the outside public, and if you do not apply and take up the debentures we shall have to turn to the open market and make the best bargain we can. The outside public, of course, have no interest in the concern, and, therefore, I would appeal to the shareholders to come forward and help us. There is another matter which is, perhaps, of interest to you, and that is the future prospects of the company. It is not very easy in colliery matters to forecast the future, but a clause in the report states that the workings of the mine are in a much better condition than they were a year ago. That is very mildly put, for I may say they are in

a very much better condition than they were 12 months ago. We are now free from the troubles of the squeeze, if not with regard to the faults. A year ago we did not know where we were. The roads were giving way, and the roofs falling, in and Mr. Wallace, having only been at the colliery a few months, we did not know how he would turn out as a manager. Therefore, no doubt the colliery was in a critical position, but I am sure every member of the board can speak most highly of Mr. Wallace's services, and also of Mr. Evans's as well. We have got through all troubles of the squeeze, and all we require is an improvement in the coal trade. It is absolutely essential that the colliery should be kept working regularly, and also that we should get an increased price for our coal. If these two things can be obtained we are very confident that we shall be again in a position to pay you dividends. I do not think I have any more remarks to make on the report and accounts, but before I sit down there is a matter I want to speak to you about, and that is the renewal of Messrs. Beynon and Co.'s contract. The directors have been carrying on negotiations with Messrs. Beynon and Co. for some months, endeavouring to arrange some terms which would be satisfactory to them, and which they could recommend to the shareholders. We did hope we should have been able to do so in time to give you notice of the proposed contract, so that it might be discussed and voted upon at this meeting; but, unfortunately, the terms were not finally settled until the board meeting held yesterday, and, therefore, it was not in our power to lay them before you, or give you notice of what they are. But as there has been a circular sent round by two large shareholders on the proposed renewal of the contract, I presume you have come here to-day prepared to discuss it, and though there is no resolution on the subject to be passed to-day, because no notice has been given, we will, after the formal business of the meeting has been disposed of, explain to you the terms which the board recommend the shareholders to adopt, and will be glad to hear whatever any shareholder has to say on the matter. The directors are quite willing to abide by any opinion the shareholders may express in this matter; but as the renewal of the contract with Messrs. Beynon and Co. is not connected with the business of the past year there can be no discussion on it in considering the report and accounts. I now beg to move the adoption of the report and accounts.

Mr. RICHARD HOLMEN seconded the resolution.

Mr. MARKHAM asked what the profit realised on the trimming had been, and also the sum realised for chartering vessels. Another question he wished to put was what was the amount of coal sold by Messrs. Beynon & Co.?

Mr. GOLDSWORTHY wished to know whether the commission paid to agents was from the time it was put in the truck at the colliery.

Mr. FERRIER enquired whether the cost per ton of getting the coal (7s. 5d.) was for the large and small stuff or for the large alone? If it was for both it was a fictitious cost.

Mr. LANGDALE wanted more particulars in regard to the debentures. How many had been taken up by whom, and on what terms?

Mr. PROUD said he thought it would be well if they were given the expenditure that had been incurred in dealing with the squeeze.

Mr. FARWELL observed that the small coal formed a large item, and asked if a larger profit could not be made on it by converting it into coke.

Mr. HARRIS asked what was the actual cost per ton on the whole yield.

The CHAIRMAN, in replying to the questions asked, said the trimming was done by the Coal Trimmers' Association, and Messrs. Beynon and Co. had nothing to do with it beyond collecting the money from each ship. The company did not charter any ships, and consequently was not paid anything in this respect. Their agents sold all the coal obtained from the colliery. The commission they paid the agents was regulated by the agreement dated October 25, 1887, which said that they should have 3 per cent. on the price of the coal delivered free on board at Newport, or any port in Monmouthshire or in South Wales, and also a like sum on the price realised for coal delivered in trucks at the pit's mouth and sold there. That is on the actual price received by the company. The cost of 7s. 5d. given in the manager's report was for the large coal only. During the first half of the year the colliery was stopped for several days, but they were useful to the company for repairs to be done. The amount of debenture stock issued was £9700. It was subscribed for on the terms put forward in the prospectus, and would be fully paid on August 1. In addition, as he had already told them, they had borrowed £10,000 on a deposit of £15,000 of the debentures, but as the mortgage was only a temporary one at the end of 12 months from the time it was made they might be called upon to take them up again, and if the shareholders did not take them up, then they would be in the position of having only £9700 out of the £50,000 issued. In regard to the "squeeze" it was a very difficult matter to say how much had been spent on it. Seeing the many repairs it necessitated, it would be a mere guess to say what it had cost them. He would ask the manager if he could say what expenditure was incurred on it.

Mr. WALLACE said it would be impossible to fix the amount.

The CHAIRMAN, continuing, said they could at least be pleased that the "squeeze" was now all over. In regard to the question as to the price the small coal might realise if turned into coke, the price of the former was 4s., but if turned into coke about 1s. 6d. a ton additional profit was made. But they must bear in mind that the number of ovens was at present limited. The average cost of getting the whole of the coal was 7s. per ton without the shipping charges. Replying to further questions, the Chairman said the profit on the trimmings, if there was any, went to the agents, who took the risk of loading the coal. As to the C.I.F. sales, the coal was sold to the agents at the market price of the day. Messrs. Beynon and Co. did not buy 1-10th of their coal for themselves, but they got their commission whether it was sold to other people or themselves for C.I.F. purposes.

Mr. BRADFORD said the last meeting of the company he attended was in 1893, when he told them that the day of reckoning would come, and the report and balance-sheet presented to them that day gave them a rude awakening from their Rip Van Winkle slumber. Of the many reports the directors had presented to them this one was the worst, and he thought they must all admit they were on the rocks.

Referring to the paragraph in the report with regard to the reasons for the unsatisfactory result of the past year's work, he said he had gone very carefully into the matter, and believed that the chief of them were non-existent. As to the exceptional state of the coal trade their output had only been 2½ per cent. less than in the previous year, when they made a small profit. In 1895 the average price was 9s. 2d., and the year ending March, 1896, 7s. 7d. Yet, he contended that this fall in the price was not warranted, in face of the fact that the reduction in the price of the coal obtained from collieries where the sliding scale was in force was only 4d. per ton. The difference in the two prices—1s. 1d.—was equal on their last year's output to £24,886. Then, again, their wages had been considerably reduced, the amount in 1895 being 5s. 6d. per ton, and in 1896 4s. 10d. Yet, in spite of these facts, although in 1895 they made a profit of £2000, in 1896 they sustained a loss. One other point he would like to mention was with regard to their floating liabilities. In 1895 they were represented at £9580, but now they stood at £22,572. He considered that some drastic measures must be taken before long, or in a very short time the company would cease to exist.

The CHAIRMAN, in replying to Mr. BRADFORD, said the average price the coal realised last year was 8s. 9d. for the large, and 4s. for the small, but the price for the former was now 6d. less. As to the allegation that they sold their coal for a lower price than they ought to have done, his explanation of this was that the previous year they were more shrewd than most people thought they were. They made their contracts at the very top prices for the whole 12 months, and realised considerably more than a good many other collieries had done. Had it not have been for the squeeze they would have paid a very good dividend. As to the liabilities, they lost £13,000 in the

working account. The directors, so far, were the principal shareholders who had taken up the new debentures.

The resolution was then put and carried unanimously.

The CHAIRMAN then proposed the re-election of Mr. Henry St. John Bailes as director of the company.

Mr. LISHMAN seconded the motion, and it was agreed to.

The CHAIRMAN said there was a vacancy caused on the board by the retirement of Mr. Richard Holmen, who did not seek re-election, and they had asked Mr. Francis to fill the post. That gentleman had consented to do so, and he, therefore, moved that he be elected a director of the company.

The resolution was seconded and carried.

The auditors, Messrs. Bagshaw and Co., and Messrs. David Roberts and Sons, were re-appointed.

The CHAIRMAN said in order to explain Messrs. Beynon's position in regard to the company he would give a short *resume* of what had taken place since the formation of the company in regard to that firm. They were, with others, the original promoters, and when they took the lease of the minerals and started the company it was subject to an agreement entered into on February 9, 1873. The agreement appointed Messrs. T. Beynon and Co., the sole agents of the company for the sale of all coal sold by them for a term of 12 years, and the company agreed to pay Messrs. Beynon and Co. 5 per cent. on the realised price of all coal sold either f.o.b. at Newport, or any port in South Wales, or at the pit's mouth, the company in no case to pay Messrs. Beynon and Co. less than 6d. per ton by way of commission. Messrs. Beynon and Co. had taken a great risk in connection with the undertaking, and those who subscribed for shares were bound by this agreement. In 1878 (the company not being very prosperous) the shareholders considered this agreement rather onerous, and although it was absolutely binding on the company, and no power on earth could make Messrs. Beynon concede one penny unless they chose to do so, a committee of shareholders was appointed with the object of endeavouring to get the agreement modified. The result was that Messrs. Beynon and Co. agreed to sell all small coal free of charge, and their commission was to be regulated as follows:—When the selling price of coal f.o.b. at Newport or any port in South Wales should be under 12s. per ton, a commission of 5d. per ton should be paid, and when the price was above 12s. per ton the commission was to be 6d. That was a concession that Messrs. Beynon and Co. willingly made, although they had seven years of their previous contract to run. In 1880 the company wanted to take the northern minerals, and they approached Lady Hanover with that object. Her agent, however, refused to deal with a Limited Liability company, and desired that the directors should put forward some substantial men to take the lease on their own shoulders. This Messrs. Beynon did, and in consideration of their having done so, their agreement was extended for a further term up to 1891. In the year 1887, they agreed to accept 3 per cent. on the whole of the coal sold, and this was approved by the shareholders. Whenever the question of their commission had been raised, Messrs. Beynon and Co. had met the company most liberally. The proposal now about to be entered with the sanction of the shareholders was that Messrs. Beynon and Co.'s contract be renewed for two years, with 12 months' notice on either side, but at 2½ per cent. instead of 3 per cent. commission. All other terms as at present. The 3 per cent. commission that they had received during the last nine years worked out to about 3d. per ton, and for that Messrs. Beynon had sold all the company's coal, found offices in Newport, Cardiff, and London, guaranteed the company against all bad debts, and paid demurrage. This they were now going to do at 2½ per cent. He thought he could with confidence ask the shareholders to ratify this arrangement which the directors had provisionally made.

Ultimately it was left to the directors to again negotiate with Messrs. Beynon and Co., and secure the best terms possible.

Votes of thanks to the Chairman, and to the manager and engineer at the colliery, concluded the meeting.

AFRICAN GOLD CONCESSIONS AND DEVELOPMENT COMPANY (LIMITED).

An extraordinary general meeting of the shareholders in the African Gold Concessions and Development Company (Limited) took place on Tuesday, at Winchester House, E.C., Mr. W. H. Thompson presiding, for the purpose of appointing a committee of shareholders to investigate the affairs of the company, and to report thereon to the shareholders, and also to receive the resignation of three of the members of the board—namely, Messrs. J. M. Coward, Robert Shackle, and W. H. Thompson. The Chairman explained at some length the reasons why the company now found itself in such an unenviable position. In the first place, starting with no cash in hand to pay current expenses, money had to be borrowed—£10,000 in all—and this had proved a great drawback to them. Then it was alleged that the property had been grossly mismanaged in Africa, as, although £11,000 had been spent on it, no returns had been given them for the outlay. When he went out to Africa, and found out the real state of things, he discharged every person employed on the property, and thus reduced the expenditure there from £300 to £30 a month. The suggestion of the directors now was that Messrs. John Taylor and Sons should be asked to examine the property and give their opinion as to its value, the fee to be paid them to be £170. The reason why the remaining portion of the capital of the company was now being called up was in order to pay off the mortgage. He moved—"That a committee of shareholders be appointed to investigate the affairs of the company and report thereon to the other shareholders."—Mr. A. J. David seconded the resolution, which, after an animated discussion, was carried unanimously. It was also resolved:—"That the directors, Messrs. Thompson, Coward, and Shackle, hereby nominate Messrs. Mayne, Chirgwin, and Jones as directors of this company, this meeting hereby resolves that the resignation of Messrs. Thompson, Coward, and Shackle of their offices as directors of the African Gold Concessions and Development Company be and the same is hereby accepted, and that this meeting endorses the nomination that Messrs. Mayne, Chirgwin, and Jones be appointed directors of the company." The following gentlemen were appointed on the committee of investigation:—Mr. Blaker, Mr. A. J. David, Mr. William Chirgwin, and Mr. William Edwards. A vote of thanks to the Chairman concluded the meeting.

RHODESIA (LIMITED).

A meeting of the members of the *abwa* company was held yesterday, at Winchester House, Old Broad-street, London, E.C., for the purpose of receiving from Mr. I. H. Hirschler, one of the local managing directors of the company in Rhodesia, a report as to the business of the company.—Sir George Campbell presided and briefly introduced the speaker.—Mr. Hirschler, in the course of his address, said he wished especially to impress upon the shareholders the large and important character of the assets which the company had acquired in Rhodesia. The company was a financing and development company, and, as such, had acquired land, town stands, forests, coal areas, and mines. Altogether, Rhodesia (Limited) held something like 380 square miles of land in a country that was pronounced on the highest authority—which he could confirm from personal observation—to be a very fine one, so far as its mineral and other capabilities were concerned. He was looking forward to the exploitation of the timber country, for the timber was of that character which would be necessary for mining and building purposes, and he had also been looking out for land situated on what was called the gold belt. The consequence was that they had now land which was situated on some of the gold belts which were recognised as the best in the country. Had it not been for the troubles which had overtaken the country, these would already have been floated as mining companies. Their claims had been selected with great care, and they had several properties which were sufficiently developed to warrant their immediate flotation. When the country was pacified, as would shortly be the case, and the means of transport improved, these could be worked to much greater advantage. In conclusion, he could assure the shareholders that if they would only exercise a little patience they would have every reason to be satisfied with the success of the company.—A vote of thanks to Mr. Hirschler terminated the proceedings.

The SUBSCRIPTION LIST will OPEN on MONDAY, the 27th inst., and CLOSE at 4 p.m. on the same day for Town, and on TUESDAY MORNING for Country Applications.

The TRANSVAAL EXPLORING COMPANY (LIMITED) OFFER for SUBSCRIPTION the undermentioned CAPITAL of the
CATARACT BARBERTON GOLD MINING COMPANY, LIMITED.

C A P I T A L - - - - - £250,000,

Divided into 250,000 £1 Shares, whereof 50,000 Shares are held in reserve for future issue.

50,000 SHARES are NOW OFFERED for SUBSCRIPTION at 25s. per £1 Share, payable 5s. per Share on Application. 5s. per Share (being the premium) on Allotment. And the balance in calls of 5s. per Share at such times as the directors may fix.

The balance of 150,000 Shares will be allotted as fully paid-up in part consideration for the purchase of the property.

DIRECTORS.

ARTHUR W. BIGGS, Esq., Director of the Transvaal Exploring Company (Limited).
 EDWARD DICEY, Esq., C.B., Director of the Transvaal Lands Company (Limited).
 EDWARD RAWLINGS, Esq., Director of the Woodstock (Transvaal) Gold Mines (Limited).

BANKERS.

Messrs. WILLIAMS DEACON and MANCHESTER AND SALFORD BANK (LIMITED),
 20, Birch Lane, London, E.C.

SOLICITORS.

Messrs. FLUX, THOMPSON, and FLUX, 3, East India Avenue, London, E.C.

CONSULTING ENGINEERS.

Messrs. ARTHUR WILSON and CO., Mining Engineers and Metallurgists,
 11, Queen Victoria Street, London, E.C.

SECRETARY AND OFFICES.

A. W. HERON-MAXWELL, Esq., 25, Abchurch Lane, London, E.C.

P R O S P E C T U S.

OBJECTS.

This Company has been formed for the purpose of purchasing and working a mining property in the Barberton district of the Transvaal, known as the Waterfall Reef, and consisting of 150 claims, double banked, giving a length of nearly 3830 yards, or over two miles along the line of the reef.

REEFS.

The outcrops of two well-defined quartz reefs can be traced nearly the whole length of the property, as shown upon the plan accompanying the prospectus. These reefs have been proved by several cuttings, trial pits, and a shaft 20 feet deep to vary in width from 2 feet to 3 feet.

TIMBER.

There is a considerable amount of timber suitable for mining purposes in close proximity to the property.

WATER.

Mr. Hodge reports that upon the Kaap River, which runs across the property, there is what may be termed a natural dam, and from this point a water race cut about 2000 yards in length would give ample fall for a turbine of sufficient power to drive 50 stamps.

Mr. SETTLE states:—

"There is an abundant supply of water, which can be had on the spot from the Kaap River. This river has always sufficient water to drive a 50-stamp mill all the year round."

Mr. ROSS states:—

"As many as 100 head of stamps could be easily driven by the Kaap River."

REPORTS ON VALUES OF REEFS.

In October and December last the property was reported upon by Mr. Albert P. A. Hodge; Mr. William Roberts, Manager of the Woodstock (Transvaal) Gold Mines (Limited); Mr. Jas. B. Settle, Manager of the Albion (Transvaal) Gold Mines (Limited), and Mr. Robert Ross.

These reports all go to prove the valuable nature of the property. The average value of the No. 1 reef is given as 15 dwt. of gold per ton of quartz by Mr. Hodge. Mr. Roberts obtained by panning from the outcrop, 1 ounce 5 dwt., and from the bottom of the workings 15 dwt. of free gold per ton. Mr. Settle reports having brought away several samples, and after crushing and sampling them very carefully, made three assays, giving respectively 1 ounce 7 dwt., 3 grains, 1 ounce 1 dwt., 15 grains, and 15 dwt. 4 grains, or an average of 1 ounce 2 dwt. 7 grains of gold per ton of quartz, and states his opinion that it is perfectly safe to calculate a return of 1 ounce of gold per ton. Mr. Ross, having taken samples of ore from each of the several workings on the outcrops of the reefs, and having carefully tested them for free gold, came to the conclusion that the average value was 17 dwt. of gold to the ton of quartz over the plates.

No. 2 reef has only been proved on the surface to give an average of about 5 dwt. of gold per ton, but is expected to become richer in depth.

In concluding their reports the following observations were made by the above experts:—

Mr. HODGE states:—

"Taking into consideration, 1st, the splendid character of the No. 1 reef; 2nd, that this panning, which were often as high as 1½ ounce, but averaged 15 dwt. per ton; 3rd, the fact that this reef can be traced for a very long distance without a break in your property; 4th, its strong outcrop; and 5th, the most important of all, its general improvement in width, as seen in the deepest workings, I can come to no other conclusion than that you possess a most valuable mining property."

Mr. ROBERTS states:—

"This property is unquestionably a high-grade proposition, and apart from the working of the various reefs, which strike approximately parallel to each other, with an undoubted continuation throughout the entire length of the claims, the underlay of these reefs is but slight, but, having this great width of claims, the possibilities of further discoveries when attacked by crosscut levels from boundary to boundary at some depth below the surface for the purpose of discovering some previously unknown reefs, cannot be over-estimated. I may state that I do not hesitate in giving the foregoing remarks, as I consider the property excellent in every degree."

Mr. ROSS states:—

"Taking into consideration the large extent of the gold-bearing outcrop, the high value of the ore (which is of a very free milling nature), and the magnificent water power, I am enabled to recommend the property as a good mining venture."

The statements in the above paragraphs are based upon the reports already quoted, which reports were made prior to the Property being offered to the Transvaal Exploring Company (Limited) for flotation. In March last Mr. H. B. Fulton of Messrs. Arthur Wilson and Co., Mining Engineers and Metallurgists, was engaged in reporting upon other Properties in the Barberton District for the Transvaal Exploring Company (Limited), and in accordance with their instructions he visited the Waterfall Property. His report, which accompanies this Prospectus, fully confirms the value placed upon the Property by the other experts.

The Directors call special attention to the following extracts from Mr. Fulton's report:—

"In visiting the Waterfall property my instructions were to confirm or refute reports which have been made on the property by Albert P. D. Hodge, Robert Ross, Joseph B. Settle, and William Roberts, copies of their reports being placed at my disposal."

"I may here state that to shield myself from any prejudice I purposely refrained from reading or even looking at the copies of these reports until I had examined the property and had made the observations recorded in the foregoing pages."

"I am pleased to say that my observations entirely confirm the previous reports. The main reef, I believe, courses continuously through the whole property, a distance of more than two miles, and a visible outcrop of it can be distinctly traced for more than half that distance. At every place it shows gold, and I regard it as a very moderate estimate to average the gold contents at 12 dwt., to 15 dwt. per ton."

"I need scarcely add that my opinion of the property is a most favourable one."

WORKING CAPITAL.

The directors have agreed not to go to allotment unless a minimum of £20,000 is provided for working capital, which is deemed sufficient for the purposes of the preliminary development, and the 50,000 shares held in reserve will be available for issue at a future date for providing the amount necessary for the purchase and erection of the fall, permanent plant and other purposes.

The Vendors, the Transvaal Exploring Company (Limited), who are the promoters, have fixed the prices to be paid for the property at £117,500, payable as to the £27,500 in cash, and the balance in cash or shares at the option of the Directors.

The following contracts have been entered into—namely, (1) an agreement, dated the 1st day of February, 1896, made between Herbert Tristram Marks of the one part, and Sidney Scott Kennedy of the other part, with supplemental agreements between the same parties endorsed thereon, dated respectively the 31st day of March, 1896, and the 7th day of July, 1896, 2. Declaration, dated the 9th day of July, 1896, by the said Sidney Scott Kennedy, that he holds the above-mentioned agreements upon trust for the Transvaal Exploring Company (Limited). 3. An agreement, dated the 9th day of July, 1896, made between the Transvaal Exploring Company (Limited), of the one part, and Horace Eland, as trustee for this Company of the other part, which agreement provides for the re-sale of the property to this Company at a profit, and for the appointment of the Transvaal Exploring Company (Limited) as the managers in London and Johannesburg, of the Company.

In the course of the negotiations for the formation of this Company for the purchase by the Vendor of the property, and for the re-sale at a profit to this Company, certain contracts or arrangements have been entered into with various persons as to guaranteeing subscriptions, the payment of preliminary expenses and commissions, to none of which contracts or arrangements this Company is a party, but which may technically fall within Section 39 of the Companies Act, 1867. Subscribers shall be deemed to have full notice of such agreements or arrangements, and to have agreed with the Company, as Trustees for the Directors and other persons interested, to waive any further compliance with the same section than above set forth, and applications for Shares will be received upon this condition only.

The contracts above specified and referred to, the Memorandum and Articles of Association of the Company, and the original reports referred to above, may be inspected by intending applicants at the offices of the Solicitors to the Company.

The Vendors undertake to pay all the preliminary expenses, including brokerage and commission, up to the first allotment of shares in the Company.

Applications for Shares should be made on the form accompanying the prospectus, and forwarded to the Company's Bankers, together with the amount payable on application.

If no allotment is made the sum so deposited will be returned in full, and if the number of shares allotted be less than the number applied for, the surplus will be credited in reduction of the payment on allotment, and any balance will be returned.

Copies of this prospectus, together with copies of Mr. H. B. Fulton's report, and a sketch plan of the mining claims prepared by the Vendors, may be obtained at the Bankers, or at the Offices of the Company, London, 18th July, 1896.

THE KENT COAL FIELD.

By F. BRADY, M.I.C.E.; G. P. SIMPSON, F.R.G.S.; and NATH. R. GRIFFITH.

MANY years ago Mr. Godwin Austin expressed an opinion, based upon theoretical considerations, that coal measures might possibly extend below the south-eastern parts of England, and in his report to the Royal Commission on Coal in 1871, Mr. Prestwich adopted the view "that there is the highest probability of a large area of productive coal measures existing under the secondary rocks of the South of England." Mr. Prestwich further expressed his opinion that the length of this supposed coal basin might extend to 150 miles, with a breadth of from 2 to 8 miles. A boring, instituted and superintended by Mr. Francis Brady, the engineer to the South-Eastern Railway and the Channel Tunnel Company, one of the authors of this paper, at Dover, with the co-operation of Sir Edward Watkin, has established the accuracy of the judgment of Mr. Prestwich and Mr. Godwin Austin as to the existence of the coal basin. This bore hole is on the great fall at the foot of Shakespeare Cliff.

With regard to the origin of the Dover boring, it may be mentioned that the probability of a connection between the Bristol and the Pas-de-Calais coal fields, taking its course by way of Dover, became a subject of discussion shortly after the publication of the Coal Commission Reports in 1874, at the time of the negotiations between Sir Edward Watkin and the promoters of the St. Margaret's Bay Channel Tunnel Scheme, and also during the progress of the Tunnel works in 1881 and 1882. When the further driving of the submarine trial heading was interdicted, in July, 1882, by Mr. Chamberlain, then President of the Board of Trade, Mr. Brady, the Channel Tunnel Company's engineer, suggested to the Chairman, Sir E. W. Watkin, that the coal question could be tested by himself with the men retained under him to maintain the Channel Tunnel Works; and the coal boring was eventually authorised accordingly.

The position of this work is favourable for pit sinking, being on the outcrop of the impermeable grey chalk, west of Shakespeare Tunnel, Dover, at the point which was selected as the best site for the Channel Tunnel works by Mr. Brady in 1874.

Before commencing to bore, a shaft was sunk, for convenience in handling the rods from the surface to sea level, a depth of 44 feet, and the bore hole was put down from the bottom of this shaft. The bore hole was commenced 18 inches in diameter, on the percussion system of boring. After passing through the first seam of coal the diamond boring system was adopted, the bore hole then

being 9 inches in diameter. The last core brought up from the depth of 2330 feet below the surface was 4 inches in diameter. Specimens of the cores are on the table, from which it will be seen that in the coal measures the stratification is horizontal. The depth from the surface to the top of the coal measures is 1157 feet, and the bore hole below this depth through 1173 feet of coal measures passed through seams containing the following thicknesses of coal (omitting seams less than 1 foot in thickness):—

	Ft. in.	Ft. in.
1	2 6	7
2	2 0	8
3	2 0	9
4	1 3	10
5	1 0	
6	2 6	
		Total 21 11

In seams from 2 feet up to 4 feet in thickness there are 18 feet of coal which may fairly be considered workable. In addition, the seam, 1 foot 8 inches thick, is also probably workable. With regard to the question whether there are likely to be other seams below the 4 foot seam, the fossil imprints brought up in boring were submitted to Mr. R. Zeiller, Lecturer on Vegetable Palaeontology to the School of Mines, Paris. It will be seen that from the presence of *neuropterus parvulus* and *neuropterus schenckeri* he concludes that the beds traversed by the boring belong to the upper region of the Middle Coal measures. There is, therefore, good reason to anticipate that a very considerable thickness of productive coal measures will be found below the 4 foot seam.

In reference to the question of an original connection between the coal fields of Somerset and Belgium, and its probable course, Mr. Prestwich, in his report of 1871 to the Coal Commission, says:—

"We know that the great original coal trough has been broken up into separate basins. The direction of this trough we think, likely to be on a line passing through North Wilts and Oxfordshire, thence across Hertfordshire, South Essex, and the north-east extremity of Kent onwards towards Calais. Or, in case of the anticlinal axis taking a more southerly course, we should look for the coal basin or basins along a line passing from Radstock, through the Vale of Pewsey, and thence along the North Downs to Folkestone."

As we have now the evidence of numerous borings to prove the existence of a range of rocks older than the carboniferous running east and west underneath London, and also know that the horizontal character of the seams found at Dover, together with the clean, bright, and uniform quality of the coal, indicate a central position in the coal basin, it will be tolerably safe to assume that future coal explorations should follow a nearly direct westerly course from Dover towards Bristol.

The length of unexplored country lying between Dover and the great coal area, between which originally included the South Wales, Somerset, and Forest of Dean fields, is about 160 miles. The carboniferous rocks found at Burford lie too far to the northward to

be taken into consideration in this connection. The horizontal bedding of the coal measures at Dover indicates that the boring is at some distance from the great Palaeozoic east and west rupture which traverses Belgium and northern France, and probably passes beneath the bed of the Channel south of Folkestone, in its course westward to the Mendip Hills. The Dover coal of the lower seams compares well with 37 samples of Welsh, which were analysed for the Government by Sir H. de la Beche and Dr. Lyon Playfair, the following being the comparison:—

Description of Coal.	Carbon.	Hydrogen.	Nitrogen.	Oxygen.	Heating Power.
Dover coal in lower seams	83.80	4.65	0.97	3.23	14,867
Welsh, 37 samples of coal required for Navy	83.78	4.79	0.98	4.15	14,858
Derby and Yorkshire, 7 samples	79.38	5.94	1.41	1.23	13,862

The comparison with the Midland and North Country coals suited for the Royal Navy, and analysed by the same two gentlemen in 1850, is even more favourable, as shown below:—

Description of Coal.	Carbon.	Hydrogen.	Nitrogen.	Oxygen.	Heating Power.
Coal from Dover boring	83.80	4.65	0.97	3.23	14,867
Newcastle, 13 samples	81.12	5.31	0.31	5.63	14,871
Derby and Yorkshire, 7 samples	79.38	5.94	1.41	1.23	13,862

The secondary strata passed through before reaching the coal measures gave no indications of the presence of water in sufficient volume to cause serious difficulties in sinking. The impermeable grey chalk and the grit below it appear to shoot out the sea effectively from the lower beds; the clay, as a rule, were found to be dry, and the sands solid. The worst ground was met with at a short distance below the Wealden beds.

A shaft 1

THE GREAT BOULDER PROPRIETARY GOLD MINES (Limited) INVITE SUBSCRIPTIONS
for 100,000 Shares of the undermentioned Issue at par.

The SUBSCRIPTION LIST will CLOSE on or before TUESDAY, 27th July, 1896, at 4 p.m., for both TOWN and COUNTRY.

GREAT BOULDER JUNCTION REEFS, LIMITED.

(HANNAN'S, EAST COOLGARDIE DISTRICT, WESTERN AUSTRALIA.)

Incorporated under the Companies Act, 1862 to 1890.

CAPITAL £175,000.

In 175,000 Shares of £1 each, of which 40,000 have been set aside for the provision of Working Capital, whereof £25,000 having been already guaranteed, the Directors will proceed to Allotment at the closing of the List. ISSUE of 160,000 SHARES of £1 each, whereof 100,000 are now OFFERED for SUBSCRIPTION, payable as follows:—2s. 6d. per Share on Application, 5s. on Allotment, 2s. 6d. one month after Allotment, and the balance, as required, in calls not exceeding 5s., at intervals of not less than one month, or payment may be made in full on Allotment.

DIRECTORS.

N. G. Burch (Chairman), Director of the New Zealand Gold Development Syndicate (Limited).

M. M. Moore, Chairman Mount Magnet Gold Mining Company (Limited).

W. Burmann Brand, Chairman West Boulder Gold Mines (W.A.) (Limited).

Colin J. McCulloch, Director Hannan's 100 Acres (Limited).

John B. Piggott, Chairman Central Boulder Gold Mines (W.A.) (Limited).

* Directors of the Vendor Companies.

BANKERS.—Brown, Janson, and Co., 32, Abchurch-lane, E.C.

SOLICITORS.—Edwin Andrew and White, 27, Clement's-lane, E.C.

BROKERS.—E. B. Haseldon and Co., 27, Throgmorton-street and Stock Exchange, E.C.

AUDITORS.—Arthur Goddard and Co., St. George's House, Eastcheap, E.C.

CONSULTING ENGINEER IN WESTERN AUSTRALIA.—Zebina Line (Consulting Engineer) to the Great Boulder Proprietary Gold Mines (Limited).

LOCAL AGENTS.—Colin J. McCulloch and Co., Coolgardie, W.A.

SECRETARY AND OFFICES.—W. C. Gould, Worcester House, Walbrook, London, E.C.

ABRIDGED PROSPECTUS.

For the purpose of amalgamation, and therefore for more advantageous working, this Company has been formed to acquire the following properties:—Leases 1109 E and 1123 E, about 12 acres each, of the Great Boulder Junction Reefs (Limited), and Leases 945 E and 1916 E, about 12 acres and 3 acres each respectively, of the Boulder Consols Gold Mines, W.A. (Limited), all situated at Hannan's, in the East Coolgardie District, Western Australia.

The mining leases to be acquired by the Company thus comprise an aggregate of about 39 acres in one group, most favourably situated in the heart of the Hannan's district, as will be seen from the sketch plan which accompanies the prospectus.

The properties have been worked for several months under the direction of the well-known Mining Manager, Mr. Robert Gibson, and the extracts given from his reports show that considerable progress has been made with development work, and that a very large lode formation has been struck.

There is also the great advantage of a plentiful supply of water from the shafts upon the property.

Mr. Lane reports as follows:—

To the Directors, the Great Boulder Proprietary Gold Mines (Limited), 2, Gracechurch-street, E.C.

Gentlemen.—In accordance with your request, I herewith submit a short report on measured portions 945, 1123, 1109, and 1916, East Coolgardie Gold-field. The total area of the four blocks amounts to 39 acres, and is situated on the line of auriferous country, and on the direct course of the Great Boulder and Lake View Lodes; in fact, taking the present indicated course of these lodes, they should pass through this property.

Several shafts and prospecting pits have been sunk, one shaft to a depth of 125 feet in a very large lode formation, carrying a strong body of water, which could be utilised to great advantage, as it is only 1½ miles distant from the Great Boulder property, and can be pumped direct to the crushing mill. I think that with proper development and a small plant to enable sinking and crosscutting to be carried out below the water level, the chances of success are equal to any other property along the line of lodes, and there is every indication of the presence of the gold-bearing parallel reefs that run with the true course of the Great Boulder Lode.

5th July, 1896.

* Mr. Gibson, the late Mines Manager, reporting to his Directors, through Messrs. C. J. McCulloch and Co., 15th February, 1896, upon assuming the management, says:—

The prospecting work done on the sections is as follows:—

Mining Lease No. 1109 E.—A shaft has been sunk near the centre of the block to a depth of 40 feet, and small crosscuts driven east and west. We have a little water in the shaft, but nothing to inconvenience. I propose sinking this shaft on down to 80 feet before crosscutting. I hope by then to have passed through the soft clay we are now sinking in to the rock beneath. By so doing we should be able to pick up a continuation of the formation now being worked in the Boulder Consols, which lies a few chains immediately to the north, a small three-acre block intervening.

Section 1123 E.—This block adjoins the 1109 E Lease on the South. On this area a shaft has been sunk near the northern boundary to a depth of 35 feet. At this depth a supply of water equal to 500 gallons per 24 hours has been cut, but I am endeavouring to get this shaft down to the same level as that in the adjoining block. This shaft has passed through bands and horizontal beds of ironstone having a very promising appearance. The leaders appear to be dipping together, and will probably lead on to something more defined as depth is attained. I have found it necessary to timber this shaft also before any sinking could be done. The prospects of your property are indeed very promising, the outcrop of a large formation being visible on the northern end of the North Block which has been proved to be gold bearing. The whole of the south section is covered by alluvium. The blocks are very favourably situated in the flat country to the south of the Great Boulder and Lake View Gold Mines, being distant about 1½ miles. A continuation of the Great Boulder and Lake View line of lodes must traverse this belt of country, and when we are in a position to crosscut the blocks I trust we shall be able to strike one of the rich lodes.

Reporting under date 8th April, 1896, Mr. Gibson says:—

No. 1 shaft has been sunk 15 feet, making a total depth from surface of 115 feet, and from the base 125 feet. Had to stop sinking and timber up 14 feet of ground near the surface, which had been loosened through the percolation of surface water from the recent heavy rains. Whilst thus engaged in timbering, the water made so fast that it took two shifts constant hauling before sinking could be resumed. The prospects were so encouraging at the 102 feet level that I decided to go on sinking, instead of opening out, as originally planned, and I have had the satisfaction of cutting into a decided lode formation, with a quartz reef running through it.

By cablegram, dated 8th April, 1896:—

Shaft has reached a depth of 125 feet. Have struck reef at a depth of 123 feet. The width of the reef is 2 feet. Very promising quartz. Water is increasing.

Section 945 E.—Reporting under date 23rd April, 1896, Mr. Gibson says:—

No. 2 shaft has been sunk a further 22 feet, making in all a total depth of 44 feet. We have passed through a number of gossan veins running parallel with the schistose formation we are now sinking in, and these on dollying gave colours of gold. This must be taken as a most favourable indication, and strengthens my opinion that good results must ensue when we are in a position to crosscut the country at a depth. No. 3 shaft has been sunk 21 feet, the total depth now being 41 feet. Quartz leaders are now numerous in this shaft.

The concensus of these reports being, in the opinion of the directors, clear as to the great value of the properties, they intend to push on with their development, and propose to erect a battery and all accessories for the requirements of the mines.

The purchase consideration has been fixed by the Vendors, who are also the promoters, and who pay all expenses of and incident to the formation of the Company up to the first allotment, at £125,000, payable as to £25,000, in fully paid Shares at par, and as to the balance of £75,000 in fully paid Shares at par or cash, or partly in fully paid Shares at par and partly in cash, at the option of the Directors, leaving 40,000 Shares available for working capital, which is considered ample.

For Contracts, see full Prospectus.

Application for Shares should be made on the form accompanying the Prospectus, and forwarded to the Company's Bankers, together with a remittance of the amount payable on application. The allotment will be made immediately after the closing of the list, and in cases where no allotment is made the amount deposited on application will be returned at once without deduction. If the number of Shares allotted be less than that applied for the sum deposited will be credited in reduction of that payment on allotment as far as possible.

Prospectuses and Forms of Application may be obtained from the Brokers, Solicitors, and the Secretary at the Offices of the Company; also from the Secretary of the Great Boulder Proprietary Gold Mine (Limited), 2, Grace-

The SUBSCRIPTION LIST will CLOSE on WEDNESDAY NEXT, 29th July, for LONDON, and on THURSDAY, 30th July, for the COUNTRY.

THE NEW ZEALAND IRON AND STEEL COMPANY, LIMITED.

Incorporated under the Companies Acts, 1862 to 1896.

Capital, £450,000 in 450,000 shares of £1 each, payable as follows:—2s. 6d. per Share on Application; 7s. 6d. per Share on Allotment; balance as required by calls of not more than 5s. each, at intervals of not less than one month.

ISSUE of 350,000 SHARES. Reserved for working capital, £300,000.

Directors.

Chairman—Earl of KILMOREY, K.P., 5, Aldford Street, Park Lane, London, W.

Sir ALEXANDER ARMSTRONG, K.C.B., F.R.S., LL.D., The Elms, Sutton-Bonington, Loughborough.

A. WORTHINGTON BIGGS, Esq., Director Crystal Palace Company, West Hill, Patney, S.W.

C. B. HOLLAND, Esq., M.I.S.I., late General Manager Ebbw Vale Steel, Iron, and Coal Company, Anerley, London, S.E.

J. COLE KEMSLEY, Esq., Maytham Hall, Bovenden, Kent.

Bankers.

London and Westminster Bank, Lothbury, London, E.C.

Bank of New Zealand, 1, Queen Victoria Street, London, E.C., for New Zealand.

Solicitors.

Messrs. Foss and Ledsam, 3, Abchurch Lane, London, E.C.

Auditors.

Messrs. C. F. Kemp, Ford, and Co., 73, Lombard Street, London, E.C.

Consulting Engineer.

G. J. Snelius, Esq., C.E., F.R.S., Bassemer Medallist, Vice President Iron and Steel Institute, Ennerdale Hall, Cumbeland.

Brokers.

London—Messrs. Scruton and Sons, 75, Old Broad Street, E.C.

Liverpool—Messrs. Hassall and Son, Queen Insurance Buildings.

Glasgow—Messrs. Struthers and Stewart, 146, Buchanan Street.

Secretary and Offices (pro tem.)

Mr. C. J. SMITH, 66, CANNON STREET, LONDON, E.C.

PROSPECTUS.

This Company is formed to meet the demand for marketable iron and steel in New Zealand and Australia, and to purchase and work the lease from the Government of New Zealand of the entire existing deposit shown on the map at the Company's offices.

This extraordinary deposit, known as magnetic iron-sand, a combination of almost pure iron with oxygen, stretches for miles along the coast of New Zealand. The lease is granted for a period of twenty-one years, with rights of renewal for similar periods, thus practically securing the best position and supply of iron-sand. The rent to be paid is twenty shillings per annum, and sixpence per ton on royalty on the iron-sand removed from iron or steel manufactured on the premises.

The Company will also acquire various most valuable inventions by which the deposit can be converted into the finest quality of marketable iron and steel.

It is proposed forthwith to erect on the site leased by Government blast furnaces, rolling mills, steel and iron foundry plant, sheet mills, &c. It is the intention of the Directors to establish works for the quality of product and weight of output shall not be exceeded anywhere, recourse being had to the very latest development of applied science and machinery, so as to reduce the cost of production to the lowest possible limit.

The Vendors state that they have completed negotiations by cable for the securing of a semi-bituminous coal deposit of seven thousand acres in extent on the River Mokau, distant forty miles by water from the proposed Works, with a reported outcrop seam of coal eight feet thick in the face of the river cliff where vessels can lie alongside. This property they are willing to sell to the Company for £8000. The Directors are advised no sinking is needed to obtain the coal, as it rises upwards by an easy gradient and is self-draining.

All other materials required, such as lime, charcoal, ferro-manganese, are in close proximity in great abundance.

The demand for iron and steel in our Australian Colonies is daily increasing, the annual imports by New Zealand and Australia being nearly £3,000,000; in addition, New Zealand is geographically well placed to supply India, Africa, and China. The Company commences work possessed of all these great natural advantages, the supply of material being practically inexhaustible. The vast and various deposits and their value cannot be overestimated, with ready and extensive markets available, with raw material in abundance, and seaboard facilities. This great industry should offer to capitalists a sure and safe investment free from competition.

The existing Government railways are within half a mile of the proposed works, and the shipping wharf about the same distance therefrom, thus ensuring facilities of transport.

The quality of the iron and steel is of the highest order, and is well suited to the very best class of work. Samples of the various manufacturers and of the different raw materials are on view at the Offices of the Company, 66, Cannon Street, E.C.

The geographical position, as will be seen from the map accompanying the Prospectus, is all that could be wished for, and in a strikingly convincing manner shows the advantages of location, and tends to confirm that New Zealand in the east is geographically what England is in the west.

The profits from the various works, after providing for all charges and working expenses, have been carefully estimated at £25,000 per annum. Accepting this as correct, it would allow of a dividend of 15 per cent. to be paid upon the capital, and provide a sum of £17,000 yearly for reserve, exploration, depreciation, &c.

The services of the patentee, Mr. E. M. Smith, have been secured as Local Consulting Engineer in the interests of the Company. In addition, it is proposed to engage the best possible technical and practical experts available, which, with modern plant and machinery, should ensure the earnings of large and steadily increasing profits.

No payment has or will be made for underwriting the capital other than brokerage, for the Directors feel assured that an enterprise of such national importance should rest upon its own undoubted merits.

It is impossible in this limited space to adequately do justice to a scheme so vast and valuable, but the Secretary will be glad at all times in business hours to afford every facility to investors to inspect the Samples, Formula, &c. Bulk samples of raw material are available in London for treatment by experts.

A contract has been entered into dated 23rd July, 1896, between John Cole Kemsley, Esq., and E. Metcalfe Smith, Esq., M.H.B., J.P., of the one part, and the Company of the other part, being an agreement for purchase of the lease, concessions and patents. Mr. Kemsley is interested with others in the purchase money, which has been fixed by the Vendors at £150,000, payable as to £50,000 in cash, £20,000 in shares, and £80,000 in cash or shares at the option of the Directors.

Under this contract the Vendors undertake to pay all expenses of and incidental to the formation, promotion, and establishment of the Company (with the exception of brokerage) up to the date of the first general allotment of Shares in the Company.

There are agreements that have been entered into by the Vendors in connection with the formation of the Company and the payment of the expenses thereof, and for the acquisition of the properties sold, to none of which this Company is a party, but which may strictly be contracts within Section 38 of the Companies Act, 1867. Subscribers shall be deemed to have full notice of the dates and names of parties to all such contracts, and to have waived their right to any further particulars thereof.

A copy of the contract for purchase of the lease, and of the Memorandum and Articles of Association of the Company, may be seen at the Offices of the Company.

Applications for Shares should be made on the form accompanying the Prospectus, and forwarded to the Bankers of the Company, together with the amount payable on application. Where no allotment is made, the deposit will be returned in full, and where the number of Shares allotted is less than that applied for, the surplus will be credited to the payment due on allotment.

Prospectuses and Forms of Application for Shares can be had from the Solicitors, Brokers, and at the Offices of the Company.

The SUBSCRIPTION LIST will OPEN on MONDAY, 27th July, and CLOSE on TUESDAY, 28th July, at Four p.m., or earlier.

HOLMAN'S LUCKY HILL GOLD MINE (Limited). New South Wales, Australia.—Capital £275,000, in 75,000 Shares of £1 each. ISSUE of 30,000 SHARES, of which 17,000 have already been allotted to the Directors and their friends. The balance—viz., 13,000 shares, are now offered for subscription. Payable 5s. on application, 5s. on allotment, 5s. one month after allotment, 5s. two months after allotment.

DIRECTORS.

Major-General G. de la Poer Beresford, Director of the Mysore Gold Fields (Limited).

C. Bingham, Esq., Director Komata Reefs Gold Mining Company (Limited).

G. Hardie, Esq., Chairman Waitekauri Extended (Limited).

F. Major, Esq., Director Hit or Miss Proprietary Gold Mines (Limited).

M. Turner, Esq., Member of Lloyd's.

Bankers—The National Bank (Limited), 13, Old Broad-street, London, E.C., and Stock Exchange.</

GOLD MINING IN COLORADO AS AN INVESTMENT.

By THOMAS TONGE (formerly of Manchester, England.)

THE "Bankers' Magazine" recently said that never before, probably, was there a time when everyone was more perplexed as to "what to do with their money." Everywhere, and on all sides, the problem of an ever-increasing dearth in investment securities yielding a fair return of interest is pressing for solution. At each succeeding half-yearly meeting of the British banks, directors have expressed their belief that a time of dearer money was approaching. "Rifts in the cloud" of stagnation hanging over the Money Market have been eagerly pointed out by financial writers. Signs of improved trade have been persistently held up as indications of something better, but as yet such rifts in the cloud have proved only momentary, and in all staple industries the profits are nominal or nil; new enterprises are out of the question, and there is an ever-increasing volume of money pressing for employment.

There is one solitary exception in the producing industries—viz., gold mining. Its peculiar features are the increasing demand and the freedom from competition. In every other industry there is a constant effort for supremacy, because there is a limited market, and the more active and stronger push their competitors to the wall. With gold mining the demand is not only practically unlimited, but the product is at once marketable, can always be disposed of to the Government, the price is fixed by law, there is no hunting for customers, no waiting for a turn in the market, and no competition. Moreover, in consequence of the fall in the price of all commodities, and the great improvements and reduced expenses in recent years in the methods of mining and ore treatment, an ounce of gold can be produced in Colorado to-day with greater profit to the producer than when gold commanded from 60 to 100 per cent. premium in America in the Sixties.

Gold mining, therefore, obviously presents an opportunity well worth consideration for the investment of the vast sums of accumulating capital.

The three leading gold districts of the world at the present time are South Africa, Western Australia, and Colorado.

South Africa presents political problems for future and possibly violent solution in the clashing race interests and prejudices of the unprogressive Boers and the ever-increasing British element, with several millions of warlike aborigines as an important factor. If capital is as timid as it is proverbially said to be, it will to a large extent wait some probable solution of these very serious race questions.

Western Australia presents apparently insurmountable physical difficulties in the absence of water and resulting conditions, which preclude the judicious investment of large sums of money there.

Colorado, on the contrary, presents (1) an English-speaking community of which, according to the last United States census, 52 persons out of every 1000 were born in the island of Great Britain; (2) a gold belt 320 miles long by 120 miles wide, comprising, according to the statistics of the United States Mint, more than 20 gold-producing counties, practically every district in which is either on the line of, or easily accessible from a railroad and flourishing agricultural districts, and can be practically reached in a Pullman car. In this belt are such places as Central City, Gilpin County, where since 1859 a little strip of country, 4 miles long by 2½ miles wide has produced over £15,000,000 sterling of mineral, mostly gold. Leadville, Lake County, where from an area a few miles square, from 1879 to the present time, gold, silver, and lead to the extent of over £40,000,000 sterling have been produced; and other celebrated mining districts like Boulder, Breckenridge, Cripple Creek, Ouray, Rico, Silverton, and Telluride.

The prospecting of the last few years has demonstrated the greater continuity of this vast gold-bearing belt—that is, what were formerly generally regarded as barren intervals between the gold-producing camps have been found to be also gold-bearing, only needing development and capital for such development, and there is every probability that some of these districts, as yet unknown to fame, will in the years to come fully equal the record of the above-mentioned places.

After 12 years' residence and close observation in Colorado, the writer has no hesitation in asserting that apparently there can yet be dug out of the mountains of the State gold far more than sufficient to pay off the American National Debt; that they will be mining gold in Colorado for 50 years to come, and that there is no better opening in the world for the judicious, intelligent, safe, and profitable investment of capital than gold mining in Colorado, if conducted on business principles. The aggregate local capital is totally inadequate even to begin to meet the case, and millions of outside capital could be advantageously invested.

Within the last ten years the conditions of mining in Colorado have very materially changed for the better. Operating, freight, and smelting charges have been largely reduced; new and more effective and economical methods of mining and ore treatment have come into vogue, and the knowledge of local geology and mineralogy has much advanced. All of the above tend to the more economic production of gold and to reduce the business of gold mining to a mathematical business proposition, which means the safer investment of money.

The result is, that expensive mines, abandoned years ago as unprofitable under the then conditions, will now, with intelligent management, show a good profit on a comparatively small capital. There are scores, nay hundreds, of such properties today in Colorado belonging to struggling men, only needing a small amount of capital to become good producers, and which properties can be obtained on lease and royalty, with option of purchase at reasonable sums.

Then, again, the newer districts present exceptionally good opportunities for development syndicates, as there are literally thousands of "prospect" holes 10 feet or more in depth, belonging to impudent locators unable to proceed further or beyond the windlass stage. The very richest mines in Colorado but a few years ago were only 10 feet holes, which have since been developed by the minimum of capital and the maximum of judgment and management into ore-shipping dividend-paying mines, and the process can apparently be repeated indefinitely. In the aggregate, very large sums of capital could be very judiciously and profitably invested in developing prospects, where the geological and other indications furnish sufficiently strong presumptive evidence to justify the expenditure. Ten thousand pounds intelligently spent in wages, spread over a number of such claims carefully selected, would open up large ore bodies, and justify further expenditure to put the properties on an ore-shipping basis. The writer recently visited such a property, less than 12 months old, where a total expenditure of £12,000 on development work, machinery, and plant already shows ore in quantity and character that can be mined and treated so as to leave £140,000 net profit.

The days of making "ducks and drakes" with money are gone. The days of intelligent mining are here, and there is no

more legitimate or profitable business if conducted on the business principles now possible.

Unfortunately, however, gold mining hitherto has largely been regarded and entered upon on a gambling and lottery basis, and an ignoring of business principles. The man who simply takes "flyers" in mining stocks, as he would on the Derby, is merely gambling, and not investing in mines, and this letter is not addressed to him. The man prepared to recognise the production of gold as quite as legitimate an industry as the production of cotton and woollen goods, pig iron, &c., and, therefore, justifying the investment of capital on business principles, would do well to bear several things in mind.

Many mining enterprises, good and sound in themselves, placed in England, have proved financial failures to the shareholders by reason of the following:—

1. Over-capitalisation. For instance, a property for which the vendor receives (say) £20,000, being more than worth every shilling of it, is floated on the British market at (say) £50,000 or £75,000, or even more, with the result that whereas the property would have paid handsome dividends on a capital of £30,000, no management can make it pay satisfactory dividends on the exaggerated sum at which it is floated.

2. Exorbitant "rake off" by promoters and middlemen, which inevitably is at the expense of the duped shareholder. Too many promoters are not content with a fair remuneration for their trouble, but look for big profits from unloading stock and not from ore shipments.

3. Excessive office and directors' expenses at the English headquarters, even though involving the curtailing of necessary expenses at the mine. The wealthiest and most experienced and successful mining men in Colorado do not waste their time on public stock companies with the minimum of efficiency and the maximum of red tape formality and office expense, but form themselves into small private syndicates or companies, the capital being furnished by themselves and a few personal friends, and the money put into efficient work on the properties.

4. Inexperienced and incompetent mining engineers, managers, &c., usually relatives or connections of the directors, sent out to report upon or manage, or in some way draw a salary at the mine. There are in Colorado considerably over a dozen mining engineers and experts, both British and American, of many years local experience and unblemished reputation, who must of necessity be more competent to pass opinions on the merits of a mining property in Colorado than any man sent from England to Colorado, possibly for the first time, and at best only an occasional and transient visitor. British capitalists would do well to utilise to a much greater extent Colorado mining engineers and experts, and, judging by past experience, would save large sums of money by so doing, not merely in the travelling expenses from England, but in the better and more reliable advice they would frequently get. Moreover, Colorado mines should not be utilised as eleemosynary institutions for younger sons and failures from England.

Colorado, as before mentioned, has a belt of over 30,000 square miles, more or less underlaid with gold-bearing veins. Capital, intelligently spent, can take out such gold to show handsome profits on the investment. The owners of the vast sums of capital seeking investment, as mentioned in the "Bankers' Magazine," would do well to consider and thoroughly investigate this subject. If they will exercise the same common sense and judgment with regard to gold mining that any other business transaction calls for, they cannot go wrong.

THE DIAMOND MINES OF CAPE COLONY.

THE Cape Department of Agriculture has just issued the report of the Inspector of Mines, Kimberley, Captain Quennell, with regard to work done in the diamond mines of Griqualand West during the past year.

Kimberley Mine.—The principal working level in Kimberley Mine in 1895 was the 1200 feet, from which the hoisting of blue ground through the rock shaft was commenced on January 12. The Rock shaft is sunk to a depth of 1583 feet. At 1520 feet a level is being driven towards the mine, and at the end of the year had reached a distance of 365 feet from shaft. This will enable eight levels, 40 feet apart, to be opened below the 1300 feet level. A prospect shaft, with ladder way, and double cage way, has been sunk in the blue ground from the 1200 to the 1400 feet level; and a good deal of development has been done from this shaft at the levels below the 1200. Double ladder ways have also been sunk on each side of the mine. The greatest depth reached in diamondiferous ground was 1400 feet. The average quantity of water pumped was 8190 gallons per hour. The highest average per hour was 11,026 gallons during the week ended June 8, and the lowest 7119 gallons for the week ended February 2. The area of the open mine is about 33 acres. There were no reef movements of importance during the years. The average number of horses and mules daily at work was 177. The average daily consumption of fuel, in tons of 2000 lbs., was:—Coal, mine, 29; and floors, 7½ tons; wood, mine, 3; and floors 3 tons. The output of blue ground for the year was 1,096,628 loads of 16 cubic feet. There has been a considerable expansion of the Kimberley Mine eastward in the deeper levels. At the 1160 feet level it has extended in this direction about 16 feet beyond the boundary line of claims opposite to Nos. 016, 017, 018, and 019. This expansion has been duly notified in terms of Section 69 of Act No. 19 of 1883. Wages ranged from £3 12s. to £6 per week to white men, and Kaffirs 21s. per week in compounds.

De Beers Mine.—All blue ground was hoisted from the 1000 feet level through the rock shaft. This shaft was not sunk during the year, but the 1200 feet tunnel from it was communicated with the chute from the 1000 feet level on January 30 of the current year. This chute is 13 feet in diameter, and is sunk in the rock near the mine, on the north-east side. A double ladder way has also been sunk in the rock from the 1000 to the 1200 feet level, and lit with electric light. A considerable amount of development has been done, in this part of the mine, at 1040, 1050, 1120, and 1160 feet levels. The greatest depth reached in diamondiferous ground, was 1160 feet. The average quantity of water pumped was 387 gallons per hour, including 347 gallons from the old Victoria shaft. The highest average was 5467 gallons per hour for the week ended June 29, and the lowest 3253 for the week ended April 20. In 1895 the area of the open mine was 21½ acres, but it has since been increased by falls of reef, principally on the south side of the mine. The average number of persons daily employed is returned by the company as follows:—Above ground, white, 201; coloured, 832. Below ground, white, 167; coloured, 1048. Total, 2346. There were 21 accidents reported from Kimberley Mine in 1895, from which 30 persons suffered; of these 13 were killed on the spot, or fatally injured. The crushing and concentration plant, which was described in last year's report, is working very satisfactorily, as will be seen by the following extract from the last annual report of the general manager of De Beers:—"The crushing plant mentioned in my last report as being in course of erection has been completed, and is now doing very good work. The best day's work is 1128 loads in 10 hours. This plant will run day and night until all the surplus hard blue is crushed. The yield of the ground for last month, July, was 78 of a carat per load. From crushings in former years, we found the yield of the hard blue to be about ½ of a carat per load." The average daily consumption of fuel, in tons of 2000 lbs., was:—Coal, mine, 38; floors, 21½ tons. Wood, mine, 4½; floors, 14½ tons. At workshops: Coal, 2½ tons; and wood, 6½ tons. Total: Coal, 61 tons; and wood 25½ tons. The output of blue ground for the year was 1,639,360 loads of 16 cubic feet. The average number of persons daily employed is returned as follows:—Above ground, white, 484; coloured (including 1037 convicts), 1638. Below ground, white, 188; coloured, 1803. Total, 4113. The average number daily employed at the workshops, at work for both Kimberley and De Beers Mines, and not included in previous figures, is returned at:—White, 299; coloured, 132, total 431. Wages to engine drivers and mechanics £5 10s. to £6 per week. There were 22 accidents reported from De Beers Mine during the year, from which 23 persons have suffered; of these 11 were killed on the spot or fatally injured.

St. Augustine's Mine.—The prospecting tunnel at the 700 feet level, which I referred to in my last report, was continued in a north-west direction to a distance of 168 feet. Underground work was discontinued on March 5, and débris washing on April 7. Operations have been principally confined to working yellow ground in the open. At the end of the year a depth of 52 feet had been worked, and 273,000 loads of ground hauled. A large proportion of this was hard yellow lumps which are to be crushed. It also included about 11,000 loads of reef. The engine formerly used for pumping has been removed to the western part of the property and will be used for driving the mechanical haulage now being made, and the new crushing and washing plant when it is erected. This plant has been ordered from England, and is shortly expected at the mine, when it will be erected for the purpose of treating the yellow ground and the lumps that have accumulated. The winding engine has also been removed beyond the boundary of the mine. The only accident was a trifling injury to one of the carpenters, who was struck by one of the standing wires, which had broken. Average number daily employed, 30 whites and 160 coloured.

Ott's Kopje Mine.—The new crushing and pulsating plant, described in last year's report, started about the end of March and worked intermittently up to the beginning of September, during which period several alterations had to be made in it. All the ground treated was yellow ground broken between surface and a depth of 50 feet. Since September operations have been suspended with a view to raising additional capital to work the blue ground. There was only one accident, by which a fireman got his leg scalded. The average number daily employed is returned as follows:—Above ground, eight white and 26 coloured; below ground, two white and 50 coloured; total, 86.

Dutoitspan Mine: New Gordon Company.—Underground work was suspended on March 9 pending the erection of the new plant, which was started in November and work resumed. At present work is being carried on in the blue ground at the 310, 330, and 410 feet levels. In the 260 feet level, which leads out into the open mine, three boilers of the locomotive type are fixed, from which steam is conveyed to a geared compound pump at the 410, equal to 12,000 gallons per hour. This pump forces the water to the 260 feet level, from whence a similar pump lifts it to the surface. The make of water at present is estimated to be about 9000 gallons per hour, an increase having been met with in the lower levels. A fire broke out at the boiler station at the 260 level on October 5, which stopped underground work for some time, but there was no accident to life or limb. The following is a general description of the crushing and pulsating plant, which takes the blue ground direct from the shaft, and is estimated to treat 1000 loads in 10 hours. The blue ground is delivered from the shaft in tracks on a bridge 37 feet above the ground level, thence it is dumped on to a 3 inch grizzly, the coarser ground from which is put through four Baxter's crushers, and meets the fine ground in two pairs of 4 feet rolls, by which the whole is reduced to 1½ inch, and is then pulsated on four pulsator boxes each 3 feet by 1½ foot. The ground passing over these pulsators is put through two pairs of 4 feet rolls, being reduced thereby to ½ inch. It is then elevated to four pulsators, the residue from which is passed through two pairs of 6 feet rolls, reduced to 3½ inch, and finally pulsated upon eight pulsator boxes. The deposit from each set of pulsators is carried transversely by screw conveyors, and delivered into one channel, for conveyance to the deposit tank, from which it is elevated and treated in the wash-up machine in the usual way. Long settling ponds, through one of which the tailings conveyor passes, are erected at the end of the gear furthest from the engine, from which water for pulsating purposes is obtained by vertical centrifugal pumps. The engine is of triple expansion condensing type, by Fleming and Ferguson, indicating up to 350 horse power. The boilers are the "Clyde" water tube, which are the first of the kind used on these fields. Green's economisers are also used, and the plant is lit with electric light.

Central Dorfontein.—There was not much work done in this block of claims, owing to falls of ground from the adjoining claims and the stoppage of the pumps of the New Gordon Mine.

Beaconsfield Diamond Mining Company.—This company acquired the claims formerly worked by the Lippiatt and Conyngham Syndicate, and carried on operations therein until January of the current year, when work in the claims was abandoned. The depth reached was about 155 feet. The area of the open mine at the end of 1895, was 44·25 acres. According to the assessment framed in November, 1895, for the year 1895-96, the number of claims was 1966, and the assessment £1,348,980. Wages to white men ranged from £4 to £6 per week, and to Kaffirs 19s. 6d. per week in compound. The daily average number of persons employed at the mine and on the floors, according to returns supplied, was:—Surface and open works, white, 68, coloured 352; below ground, white, 19, coloured 130; total, 569. There were 10 accidents from Dutoitspan reported in 1895, by which 15 persons suffered; of these six were killed or fatally injured.

Balfontein Mine.—The claims formerly held by Hunt and Reid, on the south west side of the mine, were regularly worked during the year. All claims formerly held by the North-Eastern Balfontein (Limited) have been acquired by other companies, several of which are now vigorously at work. During the year the principal work in blue ground was done by the new Balfontein Mining Company (Limited), holding 104 claims; the Balfontein Premier Diamond Mining Company (Limited), 44 claims; and the Standard Diamond Mining Company (Limited), 91 claims; and in yellow ground by the United Mines, Balfontein (Limited), 204 claims; and the Star Diamond Mining Company (Limited), 109 claims. The other companies, which have so far done very little work, are the Gem Diamond Mining Company (Limited), 69 claims; the Provident Diamond Mining Company (Limited), 32 claims; and the Sun Diamond Mining Company (Limited), 70 claims. A very complete new plant has been erected by the United Mines, Balfontein (Limited), for the treatment of yellow ground, having a capacity of 2000 loads in 10 hours. The yellow ground is taken from the mine, where the present working face is 75 feet deep, by means of a mechanical haulage, and dumped into an automatic feeding chute, where a fan feeder delivers it to the crushing rolls, of which there are three sets, the first being 2½ inches apart, the second 1½ inch, and the third ½ inch. The rolls are 2 feet 6 inches wide, the first two sets being 4 feet diameter and corrugated, the final set 6 feet diameter and plain. From the last set of rolls the crushed ground is lifted by an ordinary elevator, distributed into four revolving screens by means of dividing plates, and gravitates into four 14 feet washing pans, from which the deposit is taken by Jones's patent extractor, into a creeper conveyor about 55 feet long, and delivered at the wash up machine. The engine is a compound, horizontal tandem, with marine type condenser; cylinders 15 inch and 24 inch by 33 inch stroke, made by Robey and Co. There are two return tubular boilers. A very convenient washing gear has also been erected, and several miles of tramway laid down by the new Balfontein Company. The Star Company has also erected a washing gear close to the mine. The machinery purchased from the North-Eastern Balfontein is also in use by the various companies. The only company compounding the natives at Balfontein Mine is the United Mines, Balfontein, in a new compound recently built. The area of the open mine is about 36 acres. According to the assessment framed in November, 1895, for the year 1895-96, the number of claims was 1659, and the assess-

ment £722,610. To white men wages ranged from £3 10s. to £6 per week, and to Kaffirs 17s. 6d. per week. The daily average number of persons employed in and about the mine and on the floors, according to the returns supplied was:—Surface and open works—Whites, 167; coloured, 839; total, 1006. There were 11 accidents reported from Bultfontein Mine in 1895, by which three persons were killed and nine injured.

Premier Mine (Wesselton).—This mine was proclaimed under "The Private Mines Inspection Act, 1894," by Proclamation No. 84 of 1895, dated February 19, 1895. It is situated about 1½ mile east of Dutoitspan Mine. The first diamond said to have been found in 1890, in some ground thrown up by mair-cats. This led to prospecting, and the first wash up was on Christmas Day, 1890. The mine was rushed by 500 or 600 men on February 5, 1891, who pegged out claims, but no attempt was made to work these claims until April 22, when the rush of a large number of men took place, the old pegs were knocked aside, a washing machine placed in position, tents erected, and a diggers committee elected. On April 27 two of the ringleaders in the movement were summoned to answer a charge of trespass, and on May 4 an interdict was granted by the High Court restraining the parties from working or entering upon the property, and this was confirmed, on appeal, by the Supreme Court. Work was commenced by Messrs. Ward, Armstrong, and others in March, 1891. Mr. Ward subsequently acquired the property, and sold it to the Beers Consolidated Mines (Limited) in December, 1891, reserving the right to mine and wash 5,000,000 loads of ground from October, 1891. He proceeded with this work until it was taken over by the Wesselton Contract Syndicate under an agreement to complete it. This syndicate, after erecting machinery, commenced operations on July 15, 1893, and completed the contract on January 10, 1896. The following figures will show the work done by the syndicate between these dates, working by date, the load being 16 feet:—Ground mined and washed, 3,263,276 loads; surface lime hauled, 479,518 loads; floating reef hauled, 97,809 loads; total, 3,840,633 loads. Approximate quantity of water pumped, 1,201,200,000 gallons. On January 10, 1896, the area of the open mine was 921,500 square feet, or about 21 acres. The total quantity of ground removed was 66,435,000 cubic feet. There is a considerable area of floating reef on the north and north-west sides of the mine. Including this, the area of the mine would probably be equal to about 1100 claims. The average depth is about 83 feet. All the bottom of the mine is in blue ground. The following is a general description of the plant erected by the syndicate to treat 5000 loads of yellow ground in 10 hours. The ground is brought from the mine by a mechanical haulage up a gradient of 1 in 7, and tipped into four water-fed chutes, having fan feeders, thence passing through eight revolving screens with 3-inch mesh, the residual "lumps" therefrom being discharged upon a tray conveyor, afterwards crushed by two pairs of rolls, and washed. The ground passing through the mesh of the screens is discharged into eight 14 feet rotary pans, the overflow from which gravitates on to eight revolving mullen tables immediately below, upon which it is crushed by 15 inch round balls, turning on pivots, and subsequently washed in the pans directly under the mullen tables. The deposit from the pans is drawn off by Jones's patent extractor into a creeper conveyor about 250 feet long, by which it is discharged into the deposit tank of the wash up machine, whence it is elevated, pulsed, and placed on the sorting table. The engine, by Fleming and Ferguson, is a quadruple expansion, condensing, of 500 indicated horse power, having cylinders 12, 18, 28, and 34 inches diameter by 4 feet stroke; steam pressure 170 lbs. There are three externally fixed steel boilers with Green's economisers. The water in the mine is dealt with by an independent engine, boiler, and pump, throwing it to the gear (say) 120 feet high. During the year 1,388,203 loads of ground were mined and washed, and 99,778 loads of lime, and 55,170 loads of floating reef removed. The mine make of water is approximately 55,000 gallons per hour. The average daily consumption of fuel in tons of 2000 lbs. was:—Coal 8½ tons, and wood 5½ tons. Wages to white men ranged from £5 10s. to £7 per week. Kaffirs 20s. in compound. The average number of persons daily employed is returned as follows:—White 65, coloured 800, total 865. There were six accidents reported, by which three natives were killed and one injured from falls of ground, and two white men and four natives injured from blasting. This fine sand or small deposit from the pulsator at this mine contains an unusually large proportion of carbon, which is magnetic, and the magnetic separator, patented by Button and Wyeth, is used for treating same. As this is the first time it has been used the following description of it may be interesting:—It consists of a circular gun metal drum, closed at the back and open at the front. The drum is 3 feet long, having an internal diameter of 2 feet 8 inches in the back, and 3 feet in the front. Into this drum 12 rows of steel magnets, 8 inches each, are inserted in circular rows from the outside. The ends of the magnets within the drum are about ½ inch thick, varying in width from 4½ inches in the back row to 2 inches in the front, and project about ½ inch beyond the inner surface of the drum. They are kept in position by stays on the outside, running parallel with the drum, and each magnet has copper wire coiled round it for several inches outside the drum. The drum revolves on four solid steel rolls, about 1 foot in diameter, and not much more than 1 inch in width at the edges. The two rolls at the back are driven by bevelled wheels and cause the drum to revolve. The rolls in front simply support that end of the drum and are turned by it. The sand to be treated is taken from a hopper at the back, having a self-regulating feeder, and lifted by a very small elevator to a tube in which it falls to the inner end of the drum. The drum makes 13 to 14 revolutions per minute. A little distance from the back of the drum there is a dynamo, from which electricity is conveyed to the magnets, rendering them very strongly magnetic. The success of this separator is due to the electric current being automatically cut off for about one-fourth of each revolution on the top part of the drum. This releases the carbon, which had been attracted to the magnets during the other part of the revolution, and it drops into a receiver, fixed about 3 inches below the top of the drum, which conveys it to a box placed outside. The drum, owing to its conical shape, as it revolves, delivers at its mouth the residue, which is freed from all magnetic substances, and is caught in a locked box. It can then be easily sorted in the usual way. The advantages claimed for this process are that the bulk is reduced by nearly 80 per cent. greater than if the whole had been sorted by hand. The present separator treats a 20 feet truck of sand, weighing 2800 lbs. in 10 hours. It would take three boys a week to sort this truck load in the usual way. Two similar machines are to be erected forthwith. The working of the Premier Mine is about to be resumed by De Beers Company.

Summary.—Returns have been kindly furnished of the quantities of explosives used in 1895, as follows:—Dynamite, 359 tons; gelatine and gelignite, 19½ tons; roburite, 5 tons.—Total, 384 tons.

Labour.—The average number of persons daily employed in 1895, according to returns furnished, was:—On surface and open works, 1322 white, 4477 coloured, equal to 6101. Underground, 376 white, 3092 coloured, equal to 3405.—Total, 1698 white, and 7808 coloured, equal to 9506.

Nationalities.—As far as can be ascertained, the percentage of nationalities of white employees is as follows:—At De Beers workshops, where a considerable number of mechanics are employed, it is:—English 39.9, Scotch 19.6, Irish 2.2, Colonial 32.8, European 2.9, American 1.9, Australasian 0.7—100. The percentage of those employed elsewhere is:—English 48.9, Scotch 6.7, Irish 5.3, Colonial 35.6, European 1.4, American 0.8, Australasian 1.1, other 0.2—100.

Accidents.—There were 72 accidents reported during 1895, from which 92 persons suffered. Of these 36 were killed on the spot or fatally injured.—*South African Financial Review*.

We have to acknowledge the receipt of two well-executed maps, published by the Department of Mines, Western Australia, of the mining leases at Lawlers, and of those at Lake Darlot, East Murchison, C.T.

NEW ISSUES.

CATARACT BARBERTON GOLD MINING COMPANY (LIMITED).

With a capital of £250,000, in £1 shares, this company has been formed for the purpose of purchasing and working a mining property in the Barberton district of the Transvaal, known as the Waterfall reef, and consisting of 150 claims, double banked, giving a length of nearly 3880 yards, or over 2 miles along the line of the reefs. The outcrops of two well-defined quartz reefs can be traced, it is stated, nearly the whole length of the property, and that these reefs have been proved by several cuttings, trial pits, and a shaft 20 feet deep to vary in width from 2 feet to 3 feet. There is a considerable amount of timber suitable for mining purposes in close proximity to the property, and as for water, Mr. Hodge reports that upon the Kaap River, which runs across the property, there is what may be termed a natural dam, and from this point a water race, cut about 2000 yards in length, would give ample fall for a turbine of sufficient power to drive 50 stamps. Mr. Settle states:—"There is an abundant supply of water, which can be had on the spot from the Kaap River. This river has always sufficient water to drive a 50 stamp mill all the year round." In October and December last this property was reported upon by Mr. Albert P. A. Hodge; Mr. William Roberts, manager of the Woodstock (Transvaal) Gold Mines (Limited); Mr. Jas. B. Settle, manager of the Albion (Transvaal) Gold Mines (Limited); and Mr. Robert Ross, whose reports speak of the valuable nature of the property. The average value of the No. 1 reef by panning is given as 15 dwt. of gold per ton of quartz by Mr. Hodge; Mr. Roberts obtained by panning from the outcrop 1 ounce 5 dwt., and from the bottom of the workings 15 dwt. of free gold per ton. Mr. Settle reports having brought away several samples, and after crushing and sampling them very carefully made three assays giving respectively 1 ounce 7 dwt. 3 grains; 1 ounce 1 dwt. 15 grains; and 18 dwt. 4 grains, or an average of 1 ounce 2 dwt. 7 grains of gold per ton of quartz, and states his opinion that it is perfectly safe to calculate a return of 1 ounce of gold per ton.

THE NEW ZEALAND IRON AND STEEL COMPANY (LIMITED).

This company is formed with a capital of £150,000, of which £300,000 is reserved for working capital, to meet the demand for marketable iron and steel in New Zealand and Australia, and to purchase and work the lease from the Government of New Zealand, of the entire existing deposit shown on the map at the company's offices. This deposit, known as magnetic iron sand, a combination of almost pure iron with oxygen, stretches for miles along the coast of New Zealand. The lease is granted for a period of 21 years with right of renewal for similar periods, thus practically securing the best position and supply of iron sand. The rent to be paid is 2s. per annum, and 6d. per ton royalty on the iron sand removed from or iron or steel manufactured on the premises. It is proposed forthwith to erect on the site leased by Government, blast furnaces, rolling mills, steel and iron foundry plant, sheet mills, &c. The vendors state that they have completed negotiations by cable for the securing of a semi-bituminous coal deposit of 7000 acres in extent on the River Mokau, distant 40 miles by water from the proposed works, with a reported outcrop seam of coal 8 feet thick in the face of the river cliff, where vessels can lie alongside. This property they are willing to sell to the company for £8000. The directors are advised no sinking is needed to obtain the coal, as it rises upwards by an easy gradient and is self-draining. All other materials required, such as lime, charcoal, ferro-manganese, are in close proximity in great abundance. The existing Government railways are within ½ mile of the proposed works, and the shipping wharf about the same distance therefrom, thus ensuring facilities of transport. The profits from the various works, after providing for all charges and working expenses, have been carefully estimated at £85,000 per annum. Accepting this as correct, it would allow of a dividend of 15 per cent. to be paid upon the capital, and provide a sum of £17,000 yearly for reserve, exploration, depreciation, &c.

GREAT BOULDER JUNCTION REEFS (LIMITED).

With a capital of £175,000, in 175,000 shares of £1 each, of which 40,000 have been set aside for the provision of working capital, this company has been formed for the purposes of amalgamation, and therefore for more advantageous working to acquire the following properties:—Leases 1109 E and 1123 E, about 12 acres each, of the Great Boulder Junction Reefs (Limited), and Leases 945 E and 1916 E, about 12 acres and 3 acres each respectively of the Boulder Consols Gold Mines (W.A.) (Limited), all situated at Hannan's in the East Coolgardie district, Western Australia. The mining leases to be acquired by the company thus comprise an aggregate of about 30 acres in one group, most favourably situated in the heart of the Hannan's district. The properties have been worked for several months under the direction of the well-known mining manager, Mr. Robert Gibson, and the extracts given from his reports show that considerable progress has been made with development work, and that a very large lode formation has been struck. It is also stated to have the great advantage of a plentiful supply of water from the shafts upon the property. Mr. Lane in his report says:—"Several shafts and prospecting pits have been sunk, one shaft to a depth of 125 feet, in a very large lode formation, carrying a strong body of water, which could be utilized to great advantage, as it is only 1½ miles distant from the Great Boulder property, and can be pumped direct to the crushing mill. I think that with proper development and a small plant to enable sinking and cross-cutting to be carried out below the water level, the chances of success are equal to any other property along the line of lode, and there is every indication of the presence of the gold-bearing parallel reefs that run with the true course of the Great Boulder lode." Mr. Gibson, the late mine manager, reporting to his directors through Messrs. C. J. McCulloch and Co., February 15, upon assuming the management, says:—"The prospects of your property are, indeed, very promising, the outcrop of a large formation being visible on the northern end of the north block which has been proved to be gold bearing."

THE WEST AUSTRALIAN (GOLD DISTRICT) TRADING CORPORATION.

This corporation is formed to take over the assets of the West Australian (Gold District) Trading Syndicate formed some few months ago, which recently paid its shareholders a dividend at the rate of 100 per cent. Since the syndicate was formed the business has increased so greatly that it has been found imperative to have more working capital, which the new corporation is formed to provide. The corporation will also take over the acquired rights for Western Australia of the Atomic Ore Reduction Patents, to which the Chairman alluded at the last meeting in the following terms:—

"Now, by this wonderful process, rightly called the 'Ore Atomic Reduction Process,' the quartz can be reduced with the simplest possible machinery, costing only a few pounds, and can be made into a powder at a cost to us of about 6d. per ton. Just realize this fact that even if we charge a royalty of 5s. per ton we can save every company 10s. to 14s. per ton on all their crushings, and at the same time make an enormous revenue for ourselves. The highest grades of ore will now give splendidly increased profit, and the very lowest grades, at present thrown away as useless, will yield a high return. I am in the proud and happy position to tell you that we have secured the rights of this remarkable invention for Western Australia for our own trading company, with full and complete power to grant licenses for the whole of the colony, or to form subsidiary companies as we might think fit."

HOLMAN'S LUCKY HILL GOLD MINE (LIMITED).

This company, with a capital of £75,000, has been formed to acquire, and further develop a property known as Holman's Lucky Hill Gold Mine, comprising about twenty-two acres, situated about sixteen miles from Orange, Bathurst mining district, New South Wales, and about 6 miles from the town of Mandurana. The vendor, Mr. R. W. Hardie, of Sydney, employed Captain Dunstan, the well-known mining engineer of Sydney, to examine and report on the property. In his report, he says:—"From the character and the extent of the lode opened up in your property, together with the distance the lode is traceable from the outcrops and favourable nature of the strata, there is every reason to expect that this lode will traverse through a considerable length of your land, and from the favourable appearance of the lode going down from the 90 feet level, there is more than reasonable hope to expect that favourable results will be obtained at the 150 feet level, and, in addition to the above-mentioned lode, there are the outcrops of a second and parallel lode to the west and on your property. As yet this lode is not tested, but from the favourable nature of the surrounding, I have reasons to believe that if developed gold in payable quantities will be met with. The amount of water that we shall have to contend with below the 100 feet level I cannot at this stage say, as this shaft is going down in virgin country, but I do not anticipate that we shall have a larger quantity than we can master with the present appliances, therefore do not expect anything to hinder us in making rapid progress in development."

LONDON AND BRITISH COLUMBIA GOLD FIELDS (LIMITED).

The statutory meeting of the shareholders in the London and British Columbia Gold Fields (Limited) was held yesterday, at Winchester House, E.C., Mr. A. Johnstone Douglas presiding.—The Chairman stated that the nominal capital of the company was £200,000, divided into 197,500 ordinary shares and 2500 deferred shares. The first issue of 100,000 was over-subscribed, and all the money was available for the business. They already had very many valuable options offered them, some of which they would handle at once, and upon very advantageous terms to the company. The nature of their business warranted his prophesying that they had a prosperous career before them. They had secured the services of men of excellent reputation to represent them in British Columbia, a country which offered them abundant scope for very extensive operations. Up to the present but very little reef mining had been carried on in British Columbia, but those who knew the country best thought that it was a very vast field for enterprise and investment.—An extraordinary general meeting of the company then took place for the purpose of passing resolutions making some slight alterations in the Articles of Association, rendered necessary in order to obtain an official quotation on the Stock Exchange.—The Chairman formally moved the resolutions, which were unanimously carried, and a vote of thanks to the Chairman concluded the proceedings.

DIARY.

Saturday, July 25.

Total Gold Extraction, 32, Old Jewry, 10.30.

Monday, July 27.

Colenbrander's Matabeleland Development Company, Cannon-street Hotel, 12. Big Blow, 151, Cannon-street, 12.

Australian Mining Company, Guildhall Tavern, 1. West Australian (Gold District) Trading Syndicate, Winchester House, 2.

Cariboo Gold Fields, Winchester House, 2.

Port Phillip Gold Company, Winchester House, 2.30.

Lone Ridge Gold Mine, Cannon-street Hotel, 4.

Tuesday, July 28.

Menzie's Alpha Leases, Winchester House, 12.

Lindsay's Extended (East) Gold, Cannon-street Hotel, 12.30.

Tin Ticketing, Tabb's Hotel, Redruth.

Wednesday, July 29.

Genco Soco Rossa Granda Land and Gold, Cannon-st. Hotel, 12.

Mines Selection, Winchester House, 12.

United Mexican Mines, Winchester House, 12.

Rhodesian Claims, Cannon-street Hotel, 12.30.

Luipaard's Vie Estate and Gold, Cannon-street Hotel, 2.30.

Lagunas Nitrate, Cannon-street Hotel, 3.

Poorman Gold Mines, Winchester House, 3.

Thursday, July 30.

Oriental Estates, Winchester House, 12.

Wassau (Gold Coast) Mining Company, Winchester House, 12.

Caratal Mining Company, Winchester House, 12.

Road's Drift Land Company, Winchester House, 12.

Associated Southern Gold Mines (W.A.), Winchester House, 2.

Emerald (Reward) Gold Mining Company, Winchester Ho., 2.

Santa Anna Gold Mining Company, Winchester House, 2.30.

Roburite Explosives, Cannon-street Hotel, 3.

Broken Hill Proprietary, Melbourne.

Friday, July 31.

Polberro, 37, Walbrook, E.C., 12.

Balkis Eersteing, Winchester House, 12.30.

Clark's Consolidated, Winchester House, 2.

The London office of the MOUNT LYELL MINING AND RAILWAY COMPANY (LIMITED) have received instructions, by cable, from the head office in Melbourne, to contradict the report which the Melbourne board are informed is current in London that an amalgamation is contemplated between this company and the South Mount Lyell Company.

Mr. HENRY A. JUDD, of the firm of Eimes and Judd, mining engineers, New York, leaves Plymouth this week by the *ss Orient* for Western Australia. Mr. Judd has secured an appointment as assistant to Mr. George Gray, of Perth, the well-known expert on Westralian gold mines. Mr. Judd has had some 10 years experience in various mining camps in America.

C. PASS & SON (Limited), BRISTOL,
ARE BUYERS OF
LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS,
ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c.
and DROSS or ORES containing
TIN, COPPER, LEAD, AND ANTIMONY.

HENRY WIGGIN & CO. (Limited),
ICKEL AND COBALT REFINERS,
MAKERS OF BEST RED LEAD FOR FLINT GLASS
MANUFACTURERS,
BIRMINGHAM.

GILLIARD and HOLT,
(Established 1872)
SHIPPING and FORWARDING AGENTS TO
MINING and ESTATE COMPANIES.
Agents at Principal South African, Australian, and New
Zealand Ports.
150, LEADENHALL STREET, LONDON, E.C.

JAMES STEPHENS,
BLACK VALE SMELTING WORKS, SWANSEA.
CASE BUYERS OF
TIN ORES, TIN ASHES AND TIN SLAGS, LEAD and TYPE ASHES,
and all residues containing TIN and LEAD.
MAKER OF
TINMAN'S & PLUMBER'S SOLDER & TERNE METAL TO SPECIFICATION.
Bankers: Glamorganshire Banking Company, Ltd., Swansea.

CAPTAIN WILLIAMS, upwards of 24 years' General Manager of
the Antrim Company's extensive Mines and Works (now
resigned), is OPEN to INSPECT and give reliable REPORTS on
Mines and Mineral Royalties, either at home or abroad. He is also
in a position to recommend some excellent Iron Ore Royalties in
Co. Antrim. Terms moderate.—Address, Captain WILLIAMS,
Ballymena, Co. Antrim, Ireland.

LAMBERT'S WHARFAGE CO.,
PRINCE OF WALES DOCK, SWANSEA.
Ores, Mattes Regulus, and Bars received and prepared for market.
Copper, Lead, Tin, Spelter, and Pig Iron Received, Weighed, and
Sampled, and Warrants issued against same.
N.B.—Warrants are on Accepted List of London Metal Exchange.
Regular lines of steamers from America, Europe, &c.
Good prices can be obtained for low produce Copper Ores. Send
air samples of not less than half a pound.

THE AUSTRALIAN GOLD RECOVERY
COMPANY (Limited).
(MACARTHUR-FORREST PROCESS).

All information and terms regarding Plants and the Licensing of
this Process can be obtained on application to:
THE AUSTRALIAN GOLD RECOVERY CO. (Ltd.),
23, College Hill, London, E.C.
JAMES R. FOWLER, Esq., 14, King William Street,
Adelaide; or
GORDON WILSON, Esq., The Australian Gold Recovery Company (Limited), Charters Towers, North Queensland.

AGENTS FOR THE CASSEL GOLD EXTRACTING COMPANY'S
MANUFACTURES OF HIGH GRADE CYANIDE.

WESTERN AUSTRALIA.

MERCHANTS AND FORWARDING AGENTS.

J. H. MONGER AND CO. (LIMITED) are prepared to
RECEIVE CONSIGNMENTS of MACHINERY and
GENERAL GOODS for clearance through Customs at Freemantle,
and despatch to the Gold Fields.

Having houses both at Coolgardie and Kalgoorlie, they possess
unusual facilities for despatching from there either by Waggon or
Camels to any part of the Eastern Gold Fields.

They are in a position to despatch all consignments expeditiously
from Freemantle, and from Coolgardie or Kalgoorlie.

Head Office, Coolgardie.

Branches. { Freemantle.

Kalgoorlie.

Reference. Western Australian Bank.

London Agency, 11, Leadenhall Street, E.C.

NEW MAP OF THE COROMANDEL,
NEW ZEALAND, GOLD MINES,

Issued by the Auckland Chamber of Mines, showing the Claims
from Cape Colville to Te Aroha. Scale, 90 chains.

PRICE, 10s. 6d.

R. B. BRETT, New Zealand Press Agency, Imperial Buildings,
Ludgate Circus, E.C.

COMPANIES AND LEGAL ANNOUNCEMENTS.

Advertisements are inserted in this column at the rate of
9d. per line, with minimum charge of 7s. 6d.

THE CHAMPION REEF GOLD MINING COMPANY (LIMITED).

6 and 7, Queen Street Place, London, E.C., July 23, 1896.

AT A MEETING of the DIRECTORS of the Company held
to-day,

IT WAS RESOLVED—
"That an interim dividend (free of income tax) of 4s. 6d.
per share be and is hereby declared, payable on the 1st day of
September, 1896, to the Shareholders on the books of the Company
on the 1st August, 1896, and that the Transfer Books be
closed during the said 1st August."

JOHN GARLAND, Secretary.
N.B.—The above dividend is on account of profits made for the
second four months of the Company's financial year, which ends
30th September, making 8s. 6d. per share for the eight months to
31st May last.

THE AUSTRALIAN MINING STANDARD
IS THE

ONLY RECORD OF MINING, FINANCIAL, and ENGINEERING
PROGRESS IN THE SOUTHERN HEMISPHERE.

PUBLISHED WEEKLY. ILLUSTRATED.
Subscription, 30s. per annum (payable in advance).

Dr. B. D. PETERS, Jun., says:—"The Mining Standard is the best Mining
Journal in the World, save one."

THE AUSTRALIAN MINING STANDARD COMPANY, LIMITED.
Printers and Publishers,

SYDNEY AND MELBOURNE

The Mining Journal, RAILWAY & COMMERCIAL GAZETTE.

ESTABLISHED IN 1835.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL
GAZETTE, published every SATURDAY MORNING, price
SIXPENCE, is recognised throughout the World as being the oldest,
most influential, and most widely circulated Journal devoted to the
interests which it represents. It circulates

ALL OVER THE WORLD.

Amongst Mine Owners, Capitalists, Investors, Mining, Metallurgical
Engineers, Manufacturers, &c., &c.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL
GAZETTE has correspondents and sources of information in almost
every quarter of the globe. Its policy is absolutely independent;
its circulation is cosmopolitan.

THE MINING JOURNAL is neither controlled, nor is any
interest in it held or exercised, by any mine owner, speculator,
or syndicate; and it is in no way connected with any share-
dealing agency.

TO CORRESPONDENTS.—Letters on Editorial Matters, or containing
literary contributions should be addressed to "THE EDITOR." All matter
intended for insertion must be written on one side of the paper only. The
return of rejected manuscripts cannot be guaranteed. The Editor invites
correspondence and items of news or information from readers in all parts
of the World.

TO SUBSCRIBERS.—The Annual Subscription to THE MINING
JOURNAL, including postage, is for:—

The United Kingdom, £1 4s.

Abrd., £1 8s.

payable half-yearly in advance. It can be purchased at all Railway Book-
stalls and Newsagents throughout the United Kingdom for 8d.

TO ADVERTISERS.—The following is an abbreviated Scale of Charges for
Advertising:—Companies' Prospectuses, £12 12s. per column, or £20
per page; Companies' or Legal Announcements, 9d. per line, with a Minimum
charge of 7s. 6d.; Sales by Auction, Publications, For Sale, Wanted,
&c., &c., &c., per line with a Minimum charge of 4s.

Displayed (Trade) Advertisements of 2 inches in depth (or more), Single
Column measure, will be inserted at the following rates:—For 52 inser-
tions 2s. 5d. per insertion for each inch in depth; for 25 insertions 3s.
per insertion for each inch in depth; for 13 insertions 3s. 6d. per insertion
for each inch in depth. Terms for special positions and contracts may be
had on application.

ADVERTISEMENTS (which should in all cases be sent direct to
THE BUSINESS MANAGER) can now be received for the forthcoming issue
of THE MINING JOURNAL, RAILWAY AND COMMERCIAL
GAZETTE, on FRIDAY, at 18, FINCH LANE, E.C., till 6 p.m., and
at 3, DORSET BUILDINGS, SALISBURY SQUARE, E.C., until 9 p.m.

REPRESENTATIVE IN

VICTORIA: J. J. HENDERSON, 369, Collins Street, Melbourne.
NEW ZEALAND: W. F. McWILLIAMS, Thames.
SOUTH AFRICA: O. SACERDOFE, Gerson's Buildings, Johannesburg.
GERMANY: F. E. CLOTTEN, Konigstrasse 9, Koeln n. Rh.

Editorial and Advertisement Offices:
18, FINCH LANE, LONDON, E.C.

Telegraphic and Cablegraphic Address: "TUTWORK, LONDON." Codes used: "A.B.C.", "Morning", and "Universal."

CONTENTS

Of this Number of "The Mining Journal, Railway and
Commercial Gazette," July 25, 1896.

NEW PATENTS	945
CONTRACTS OPEN	945
JOINT STOCK COMPANIES: New Registrations	945
MINING IN SPAIN (ASTURIAS)	946
KARLAM ENGINE PACKING	946
BRITISH GUIANA'S GOLD INDUSTRY	946
THE CAUSES OF DEATHS IN COLLERY EXPLOSIONS	946
MINING IN VICTORIA	947
THE WILD WEST COAST OF TASMANIA	948
MEETINGS OF MINING COMPANIES	948
The H.urski (N.Z.) Associated Gold Fields (Limited)	948
Hannan's Empire Gold, Minagle's Gold Development	949
London's Gold Mine (Limited), West Frances	950
Newport Abercrombie Back Vein Steam Coal Company (Limited)	951
THE KENT COAL FIELD	952
GOLD MINING IN COLORADO AS AN INVESTMENT	952
THE DIAMOND MINES OF CAPE COLONY	954
NEW ISSUES	955
DIARY FOR NEXT WEEK	955
LEADING ARTICLES	955
Kalgoorlie (Hannan's)	955
Impending Coal Strike, Meyer and Charlton, Londonderry, Native Labour on the Land, Relief to the Ironstone Mining Industry	957
Mount Lyell, A Reliance at Home Mining	958
THE MINING MARKET	958
NOTES FROM WESTERN AUSTRALIA	958
SIDE LIGHTS ON THE LAW	959
PROVINCIAL SHARE MARKETS	959
THE METAL MARKETS	959
THE LONDON METAL MARKET	959
"THE MINING JOURNAL" SHARE LIST	960-961
PARIS LETTER	962
CORRESPONDENCE	962
COMPANY FINANCE	962
LATEST FROM THE MINES: Cablegrams and Telegrams	963
REPORTS FROM THE MINES	964
METAL CIRCULARS	966
MINING IN CORNWALL AND DEVON	967
THE GLENROCK CONSOLIDATED (LIMITED)	967
ADVERTISEMENTS—(See Index to Trade Advertisements, p. 942).	968

LONDON: JULY 25, 1896.

KALGOORIE (HANNAN'S).

THE rapidly rising town of Kalgoorlie (Hannan's)—a town
dropped down, as it were, from the clouds on a desert of
sand—with its restless activity and go-a-headedness, is
typical of the remarkable group of mines of which it is the
centre. From a point 1 or 2 miles north of the town, right
away southwards nearly to Hannan's Lake, a total distance
of about 8 or 9 miles, there extends a wonderfully continuous
auriferous belt, 1½ to 2 miles across, covered with mining leases
like the squares on a chess-board, dotted thickly with rude
mining camps, and in which reefs seem to occur with almost the
thickness of leaves in Vallambrosa. In travelling over the
district, and observing the crowds of mines in which active
operations are going on, one is at first struck with the almost
entire absence of machinery; the explanation is that most of
the properties have not yet got beyond the prospecting stage,
and thus it happens that the familiar windlass for the shallower
pits, and the whip or horse derrick for the deeper trial
shafts, are the only mechanical appliances which are
required or justified; and in the case of those mines in which
the reefs have been intersected by sinking, and levels started
thereon at depths varying (say) from 50 to 150 feet, the reason
that the hoisting is still being done by the whip is the difficulty
of getting engines, boilers, and machinery of all kinds up to the
mines from the coast—that is to say, from the port of Free-
mantle. This difficulty is gradually being surmounted since the
opening of the railway to Coolgardie on March 23, but an
enormous congestion of mining appliances, and goods of every
description, still exists at Freemantle and at various points

along the line. Wherever one goes the complaint is general—
viz., portions of the machinery have arrived on the ground,
while other parts are delayed, and lying somewhere between the
port and Coolgardie; and, as generally happens, the parts which
are first wanted come in last. This state of things is, of course,
exasperating in the extreme both to managers and engineers on
the spot, and, no doubt, puzzling to directors at home, but it
cannot for the moment be helped. It will, however, remedy
itself later on. A decided improvement has taken place since
the railway reached Coolgardie, but the 24 miles between that
centre and Kalgoorlie, and the further distance of (say) ½ mile to
6 or 7 miles to the mines have still to be covered by the
teamsters over unmade "roads" of dry soft sand, cut into a
multitude of deep ruts by the enormous and heavy traffic, and
a cartage has to be paid for at the rate of 26s. to £7 per ton.
A novel feature to those unfamiliar with waterless countries
is that every wagon carries an iron tank filled with water for
the horses and driver, and this has to be replenished now and
again along the road by purchase at such spots as have con-
densers erected. Here and there one sees a notice board nailed
to a tree notifying that water is sold at the condensing station
near at hand at 3s. per gallon. This seems to be the normal
rate at present. At those stations some enterprising parties
set to work, and sink a deep well till they find water, which is
certain to be brackish; a condenser is then set up, consisting
of a boiler for boiling the water and a series of cooling pipes
for condensing the vapour.

The extension of the railway to Kalgoorlie is proceeding
apace. Great preparations to celebrate the auspicious event are
being made by the enterprising people of Kalgoorlie. The
number of mines which have struck gold-bearing reefs are
many, but the number which have commenced crushing
and reduction operations are comparatively few; they
are, however, steadily increasing. The largest gold
producer is, of course, the Great Boulder Proprietary.
This mine has command of 25 heads of stamps at present,
five of which are hired at a public crushing battery.
Another 10 heads are now being erected on the company's
ground, and still another 10 heads are on order. There
can be no doubt that the mine justifies the outlay,
judging from the excellent fortnightly returns and the
splendid quality of the ore as indicated thereby. The mine is
200 feet deep, and pumping machinery is in course of erection to
enable sinking for a 300 foot level to be undertaken forthwith.
The first crushing at Hannan's Brownhill was looked forward to
with the keenest interest, seeing that a new depart-
ture had been initiated, and it was felt that dry
crushing, about which so much had been said and
written, was on its trial. There seemed to be considerable
delay in the long looked-for clean up, and pessimistic folks
began to prognosticate unsatisfactory things, though no one
hinted that the reef is not rich and powerful. The result of the
first clean up was:—Crushed, 96 tons of 2000 lbs.; yield, 462
ounces of smelted gold. The average was, therefore, 4 ounces
16 dwts. 6 grains per ton; undoubtedly a very fine average. It
is further stated that the tailings contain only 3 dwts. per ton;
also satisfactory. The feature, however, which is less pleasing
is that only 96 tons were treated in 308 hours, or 8 tons per
day, instead of 30 tons, as was reckoned upon, notwithstanding
that the ore is a soft schistose stone. What seems fairly
established is that while the combined barrel amalgamation and
cyanidation is successful in extracting the precious metal, the
dry crushing process is defective, inasmuch as the quantity
passed through the crushing mill is so absurdly small. It is
common knowledge here that the difficulty lies in the clogging
of certain parts of the mill by the damp ore. This it is ex-
pected to remedy by artificially drying the ore before passing it
through the crusher, and confidence is felt by the managers,
it is understood, that with this modification the rate of 30 tons
per day will yet be reached.

The people of Kalgoorlie had in the early summer a
grievance, and protested loud and long in leading articles and
letters to their local newspapers against the glaring injustice
of their gold output being published by the authorities under
the head of Coolgardie, when, as is generally known, East Cool-
gardie (the Hannan's, Kalgoorlie, district) has been for some
time a separate and proclaimed gold field, distinct from the
Coolgardie gold field, and has been far and away the largest
gold-producer of the two, and nearly equal to all the other fields
of the colony put together. This grievance has been remedied,
and the East Coolgardie field has now, for the first time,
separate returns. The official returns of the various gold fields
for May are:—

	Ounces.
Coolgardie	3,760*
Hall's Creek, Wyndham	115
Pilbara	2,654
Dundas	57
Murchison	3,195
Yilgarn	1,517
North-east Coolgardie	128
East Coolgardie	10,795
North Coolgardie	42
Total	22,266

In this connection it may be interesting to add that the Great
Boulder output for the same period was 5752 ounces, or 25%
per cent. of the total production of the colony for May. The
Ivanhoe Mine has at present a 5 head battery only, but new
stampers are being erected, and 15 now full weight heads
will be running. This is one of the few fortunate
concerns which has not only plenty of good stone to<br

The main lode, a quartz reef—an almost exceptional occurrence in this belt—from which the returns are obtained, maintains its great width of 15 feet to 20 feet, its general high average value. Next to the Great Boulder no mine on this field has finer prospects. The Golden Horse Shoe adjoins the Ivanhoe on the south, and is fortunate enough to have the Ivanhoe main lode traversing its ground. They are now engaged in opening it up, and another fine-looking lode as well. This mine has a small battery of three heads with which it has made one or two trial crushings.

THE IMPENDING COAL STRIKE.

IT is necessarily with mixed feelings that we contemplate the justification by after events of the remarks published in our columns early in the year, foretelling the imminent danger of a great coal strike; for while we cannot but be glad that our views, despite the chorus of dissent which they evoked, have, after all, turned out to be accurate, it is, on the other hand, impossible to contemplate without dismay the split in the coal industry, which seems every day to be drawing nearer. It is much to be feared that the conciliation principle, whose success we hoped for rather than expected, has been tried and found wanting, and that wholly on account of the obduracy of the miners themselves, who, both directly by resolution and indirectly through their representatives, have put obstacle after obstacle in the way of its successful working. The cause of the present disagreement is an admirable illustration in point. The revival in trade generally, and in the coal trade in particular, which took place some years ago, justified an increase in the wages of the men, and it was granted to them in so liberal a measure that their earnings are now some 30 per cent. above what they were in 1888. It will thus be seen that the miners participated to the full in the improvement which took place in the condition of the country's industries, and had the prosperous times of 1890 continued indefinitely there would, of course, have been no reason why any alteration should have been made in the *status quo*. Everybody knows, however, that a considerable change has since taken place—the extent of which stands revealed in the prices at which contracts are now taken—a change which, in the opinion of the employers, has rendered it necessary that a reduction should be made in wages if the coal industry is to be carried on profitably in their regard. The attitude of the men on this question is one of stolid immovability. Their wages have, on the tide of prosperity, risen to a certain point, and let the laws of supply and demand work how they may they will not consent to the most inconsiderable abatement from the high water mark. It is, perhaps, somewhat excusable that they should find it difficult to see how, when the general trades of the country are in so prosperous a condition, the coal mining industry should, to a certain extent, be out of hinge with the commercial revival. The trade papers themselves, whose business it is to grasp and give point to the situation, can only offer a tentative explanation in the suggestion that an over-production of coal has taken place. Should this explanation turn out to be the correct one, it will doubtless afford some satisfaction, and, perhaps, even disillusionment, to those nervous individuals who are for ever predicting an exhaustion in our coal supply, but, meanwhile, it is certainly a rather inconvenient factor in determining the general commercial condition obtaining in the country, and one that exerts a depressing influence upon the coal trade. The only possible remedy for this would be a control of the coal production of the country, but the vast extent and complicated character of the industry in this country is such as to make such an attempt fraught with the very highest difficulty, to say nothing of the objections innate in any attempt to interfere artificially with the natural laws affecting commercial and industrial expansion in the United Kingdom. "The employers," says an influential trade organ, "in short are powerless to help themselves unless they could arrange to regulate production and prices alike by working the whole trade as if it were a single individual undertaking, and this has again and again been declared to be impossible." Failing some such accomplishment as this, the only possible outcome of the present situation, if the men persist in refusing all concession, is a gigantic strike with all its terrible evils to the whole industrial system of the country, and in a very particular and special way to the interests of the masters and men themselves. It is difficult to avoid the reflection that the whole attitude of the men on the question of labour agreement and disagreement is one that renders it extremely difficult to bring about a natural and easy adjustment of those matters upon which the good relations of employers and employed depend. Their attitude, first, on the question of wages—which underlies all others—is one of unwavering obstinacy, and at the moment it certainly looks as if there was to be a repetition of the suicidal conflict which England has seen so much of in the past. Colliery owners are not philanthropists, and cannot be expected to work their mines when all profits are gone, and they have again and again asserted that if the pits are to be worked profitably under existing conditions a reduction must be made in the workmen's wages. It would be pleasant to think that by a display of moderation on both sides—by men as well as by masters—for it is only by concessions of the mutual sort that any agreement between conflicting interests can be arrived at—the great danger which now threatens us might be averted. The evils which will result if the present trend of affairs is allowed to arrive at its ultimate conclusion are not confined to the coal industry itself. That industry lies at the very base of the manufactures of the country, and anything which vitally affects it must also radically affect our whole commercial system with the many ramifications spread through every town and village of the kingdom. The very magnitude of the interests involved should make the parties concerned pause and consider whether, after all, some reasonable settlement cannot be arrived at, and whether it is absolutely necessary to plunge the whole economical activity of the country into disorder and war.

MEYER AND CHARLTON.

TO make any forecast in the present uncertain and—to a considerable degree—unreliable state of affairs as to the light in which the market will eventually regard individual companies is somewhat hazardous. For some time now, as we have weekly recorded, no section of the mining market has displayed any conspicuous activity. Listlessness has, more or less, characterised the whole of it, especially the South African department. There are many causes to account for this, and as these causes are likely to exist for some time to come, there is little hope that a change for the better will take place yet awhile. It is the general opinion, indeed, that no special activity will be displayed until after the holidays, though it is not absolutely certain that even then any great improvement will take place. In the meantime, however, a splendid opportunity is presenting itself to investors to pick up shares at cheap rates, not only for the rises which will inevitably take place, but for the dividends which are even more certain. Amongst the South African companies which are deserving of wider attention, considering its greatly improved prospects, is the Meyer and Charlton, and it will be a matter for much surprise if it be not amongst the first to benefit from the accession of energy in the market. It is true that the company has caused a little disappointment of recent years, and a little over a year ago it was the subject of much criticism and comment. The cause of all this was the delay in realising the anticipations formed by the officers of the company, but when the explanation was offered in the annual report it effectually removed this dissatisfaction. The explanation was that on starting the new mill the mine was not sufficiently developed to work on the old Meyer and Charlton reefs alone, and the company, therefore, had to fall back upon ground acquired some time ago from the Wolsingham and Wolhuter Companies, which was far from being as rich as the Meyer and Charlton ground. Moreover, since the large mill of 60 stamps has been in use, 50 per cent. of the ore crushed consisted of Main Reef Leader and Main Reef, whilst although the South Reef—the richest in the property—widened out on the 5th level to three times its normal thickness, it deteriorated in value. The Chairman, however, despite these disadvantages, was able to hold out hopes of a most successful future, especially when the 80 stamps were fully at work. He estimated that the profits would be between £8000 and £9000 per month, from which they would be able to pay large dividends. The 20 additional stamps have been in work since April 1, though during that month only 10 were in operation, owing to the scarcity of native labour. Already a great improvement has taken place in the monthly output. At the present moment the mine is in a splendid position, development being over two years ahead of the mill. The main incline shaft is now down over 800 feet, and in it are seven levels. In the first, operations have been principally confined to the opening up of the Main reef, where a large quantity of ore is ready for stoping. The same reef has also been opened up at the second level. At the third level drives on both the Leader and South reefs have been completed to the eastern boundary, and winzes have been sunk to the fourth level. One thing greatly in favour of this company is the determination of the directors and manager to cut down expenses to the lowest limit. When the 60 stamps were put to work on July 1 of last year the expenses naturally increased, but it was only temporary, for since then a rapid decrease has taken place. This economical working should not only swell the profits, but considerably effect the life of the mine, inasmuch as it will enable poor grade ore to be worked at a profit. Improvements are being continually introduced in all departments, as well as necessary extensions. Even in the matter of labour the company is well off, and it can only be some colossal and unexpected obstacle which can stay the success awaiting it.

LONDONDERRY.

ALTHOUGH, materially speaking, the shareholders in the Londonderry Gold Mine did not receive much encouragement at Wednesday's meeting, they at least were not without the solid satisfaction of knowing—what they might have gathered at a much earlier period in the history of the undertaking—that the conduct of their affairs is in the hands of honourable men. Presumably, no one now doubts that there was no member of the public at large who subscribed for shares in the Londonderry enterprise who was more in the dark as to the actual character and potentialities of the mine than the directors themselves. Their conduct since the bubble burst could not have been more unimpeachable, nor have reflected more honour upon their sterling qualities of character. That two gentlemen should return to the shareholders profits amounting to many thousands of pounds, both in hard cash and shares, is hardly less than an epoch in City history, and should serve rather as a striking lesson in high character than as an object for scorn to those speakers at company meetings, who are so fond of sneering at what is termed—with an irritating assumption of superiority—"the Londonderry fiasco." To be sure a fiasco it has been in the broadest meaning which attaches to the word. Failure could hardly have gone farther than with the Londonderry Mine, but the directors are no bloated monopolists in disaster, and there is positively no ground for believing that from the commencement they have acted in anything but most perfect good faith, and the most transparent honour. The Londonderry was floated at a time when our knowledge of the geological settling of the auriferous deposits in Western Australia was limited in the extreme, and when the extraordinarily patchy character of the gold mines in that thirsty country was not half so widely known. There was then no precedent, or knowledge, to deter men from believing that the "golden hole"—as the wise men who speak always after the fact are so fond of calling it—was a veritable gold mine, promising well in assay, and holding out hopes of a permanently remunerative output. Now, when

every post brings sheets of assay figures, and after a crowd of experts, more or less habile, have covered reams of paper with their reports, we are at great advantage in forming our judgments, and ought not to perpetrate the injustice of applying the same canons of criticism to the earlier action and utterances of directors concerned in West Australian properties, as might fitly be applied to them at the present time. The shareholders themselves are the proper objects of our commiseration, but not more so than those of many another company that has fallen among the rocks of over-capitalisation, and who, in addition to losing their money, will, if they are wise, have long since come to see that their enterprise was from the first doomed to failure by the very manner of its inception. The board of the Londonderry, moreover, have achieved the merit of frankly recognising the situation, and of not having gone deeper into the mire by moving heaven and earth to make a debenture issue, or to make the failure worse by reconstructing. In these reflections the Londonderry shareholders may, perhaps, find some consolation.

NATIVE LABOUR ON THE RAND.

THE proposal to increase the wages of the native labourers employed upon the Rand is an undoubtedly encouraging symptom in the outlook in that part of the industrial world. Only a short while since there were many and loud complaints as to the scarcity of the native boys—and the output was even prejudicially affected by this circumstance—while now there would seem from this retrenchment proposal to be another tale to tell. There seems to be a general agreement among the managers that the rate of wages has been forced to an artificial height by the former scarcity, conjoined to the wide demand for natives to work on the mines, and they are now very properly taking steps to effect the necessary reduction. No doubt the change will entail considerable hazard upon those who are resolved to make it, for, as has often been pointed out in parallel cases, any interference with the law of supply and demand is generally attended with some danger, and can only hope to be successful when it is made on the initiative of an all-powerful organisation, cemented by the common interests of its members. When times of scarcity arrive the greatest possible strain is put upon the combination, each individual member being impelled by the strongest motives to break away and take separate action on his own account and for the benefit of his own particular company. Defections of this character, no matter how small their number, are fatal to the whole movement, and a period supervenes when the extravagant bidding for native labour recommences with disastrous results. There is also something in the view that the balance of supply and demand should be left to adjust itself, and that when the supply increases the wages will go down under the impulsion of economical law. How far the greater supply of native labour is due to the action of the local Chamber of Mines it is, of course, difficult to say, but there can be no doubt that their efforts in this direction were exceedingly useful in the result as well as fine in conception. There are, besides, other difficulties in the way of bringing about a uniform rate of wages all over the mines, since the workmen in the deep level mines are invariably paid on a higher scale than those at work on the outcrop. Granted that the reduction in wages is to take place, there remains some difference of opinion as to the manner in which it should be effected. Some are of opinion that it should have effect in the direct way—that so much less per diem should be paid to the men, while others incline to the belief that it would better meet the necessities of the case, and at the same time occasion less dissatisfaction among the natives, if a certain deduction were made for food. Another section inclines to the opinion that a percentage on the earnings would be the best mode of remunerating the "boys." There is a good deal to be said for each of these several methods, and in any case there is not likely to be much difficulty encountered in bringing about an agreement upon such a minor point as this. The broad question lies beyond, however, and its settlement will effect in no small measure the future of Rand mining.

RELIEF TO THE IRONSTONE MINING INDUSTRY.

OPPRESSED greatly as the inland districts are, alike as regards ironstone, coal, lime, and other essentials of manufacture in the matter of railway rates, the news of a little lightening of their heavy burdens has within the past few days given rise to such feelings of satisfaction as may best find expression in the words of SHAKESPEARE—"For this relief much thanks." Some little time back the South Staffordshire coke trade—thanks largely to the good offices of Sir ALFRED HICKMAN, M.P., the iron and steel master and colliery proprietor—was freed from a portion of the imposts previously levied upon it, and now the ironstone traffic in the north of that shire has also just obtained an amelioration of its condition which, though slight, is yet extremely welcome. We allude to the judgment given by the Railway and Canal Commissioners in the matter of the application of the North Staffordshire Chamber of Commerce against the North Staffordshire Railway Company, for an order of the Court enjoining the company to desist from charging an increased terminal charge of 3d. per ton. This charge was for station terminals in respect of bricks, tiles, ironstone, and general mine material traffic from central stations and wharves and sidings. In 1895 the company stated that they would henceforth charge in respect of the traffic which passed over their own sidings, wharves, and stations, a terminal of 3d. per ton; and as to the residue of the traffic which passed over private sidings, they would charge the rate theretofore charged. The application of the traders has been made in respect of the additional 3d. It seems that it was in 1892 that the company for the first time received the right of making this terminal charge in regard to services rendered at their own stations. Now, under the Act of 1894, the owners of private sidings are empowered to claim a rebate, and the railway company, it seems, considered themselves quite

justified in forestalling and avoiding that consequence. The Commissioners have held that this policy of forestalling did not negative the right of the railway companies to raise the rate, and, therefore, with regard to the brick traffic they have allowed the full 3d. per ton. Fortunately, however, the Commissioners have given relief in the case of ironstone, reducing the addition by one-half, and leaving it at 1½d. per ton.

MOUNT LYELL.

The Mount Lyell is destined, in the opinion of all those who have studiously followed its career, and who are intimately acquainted with its present condition, to become one of the greatest mines in the world, and, as a copper producer, to take rank with such colossal concerns as the Rio Tinto and the Tharsis. During the last two years it has made most wonderful progress, and in consequence it has attained a position which has set everyone talking. In Victoria and Tasmania it is one of the principal subjects of conversation, and experts, and those who know the property thoroughly, do not hesitate to predict for it a career of brilliant prosperity. Nor does it seem destined to rely solely upon copper, for some very promising discoveries of gold have been made, as well as of silver. The company is but a young one, having been formed only as recently as 1883. The property is situated on the west coast of Tasmania, the mining leases covering an area of about 320 acres. At the end of May the half-yearly meeting of the company was held in Melbourne, the particulars of which have only just reached us, and from these we learn that during the year the exploration work has proved the ore body to extend to a considerable distance further south than was demonstrated at the close of the previous half-year, and, in addition, that further deposits of high-grade ore have been revealed in several of the underground workings. Most satisfactory progress has been made with the open-cut system, and when the further progress of the railway ensures a sufficient supply of coal, smelters will be kept at continuous work. Copper, gold, and silver in the open face is averaging very high, and a quantity of ore taken from the No. 2 bench equalled 3 dwts. gold, 9 ounces silver, and 6 per cent. copper; while underground in the south drive from the No. 3 tunnel, the ore taken averaged 1 dwt. gold, 12½ ounces silver, and 12½ copper. Before any substantial results can be looked for it is found absolutely necessary to spend more money on the present works. The money raised by the issue of debentures has not been sufficient; consequently the directors have asked the shareholders for another £40,000. This, they think, will leave a margin of £20,000, which, if it can be saved, they will utilise in the erection of additional smelters. Should they be able to do this, it will greatly improve the company's prospects.

A GLANCE AT HOME MINING.

LIKE the unfortunate individual who was so absorbed in watching a balloon ascent that he heeded not the yawning chasm at his feet, there seems some danger that, in studying the galaxy of colonial and foreign enterprises, the English nation will forget to give sufficient encouragement to the home industry. There is, it is true, at present no sign of what the Stock Exchange people unmelodiously call a "backwardation," but in stirring and expansive times, such as these, it might have been anticipated that British mining would register a large increase. Such, however, has not been the case for 1895, and while for that year the output of coal was greater than for the preceding year by considerably over a million tons, there was a decrease of some thousands in the number of persons employed, which must mean, of course, a considerable loss to the labouring section of the community. Justice compels the admission, however, that the decrease may be partly due to labour agitation—there being a large number of concerns which are forced below the line of possible remunerative working by the large and, in some cases, unreasonable demands for higher wages formulated without regard to the laws of political economy. It is useless in these days of sharp competition to suppose that the companies can afford to give way to philanthropy when settling upon their men's wages. No one requires to be told that European nations—and the colonies for the matter of that—are entering largely into competition with England in commercial production, and if we would not see our trade faltered from us by our more progressive and, in some respects, more fortunately-situated competitors, it is of the first necessity that there should be union and enterprise at home. Figures, however, in regard to the coal output in Britain are highly encouraging, and show that the industry is not in much danger of collapsing. During 1895 the total output of minerals at mines under the Coal Act was 201,738,351 tons, of which 189,652,562 were coal, 2,314,983 fire-clay, 7,231,835 ironstone, 2,246,865 oil-shale, and 292,106 sundry minerals. With the addition of 8,900 tons from open quarries, the total output of coal was 189,661,382 tons, which exceeds by 1,383,837 tons the output of 1894, which was the highest recorded up to that year. These statistics are certainly a grand corrective to despondency, so far as coal mining in Britain is concerned.

THE CHAMPION REEF GOLD MINING COMPANY OF INDIA (LIMITED).

At a meeting of the directors of the company, held on Thursday, it was resolved:—"That an interim dividend (free of income tax) of 4s. 6d. per share be and is hereby declared, payable on September 1, 1896, to the shareholders on the books of the company on August 1, 1896, and that the transfer books be closed during the said August 1." The above dividend is on account of profits made for the second four months of the company's financial year, which ends September 31, making 8s. 6d. per share for the eight months to May 31 last.

The secretary of the New GUADALCAZAR QUICKSILVER-MINES informs us that a further draft for £500 has been received from the mines.

THE MINING MARKET.

FRIDAY EVENING.

Another week of stagnation.—Movements insignificant, and the public conspicuous by its absence.

IT appears almost ridiculous to set about writing a report on the week's business in the Mining Market. Since we last assayed the task, business has been even more conspicuous by its absence than was the case previously. Perhaps the sultry weather has had something to do with it, but whatever the explanation may be, the fact remains that the places where once the dealers used to congregate have been deserted, and dealers plaintively protest that they have not seen a broker for days together. Under such conditions, it is not to be wondered at that quotations have sagged away. It is the invariable experience that such should be the case. As far as South African affairs are concerned the factors which might have been expected to influence the speculative situation, have been the garbled accounts of the report as published of the Cape Commission on the Jameson raid, the trial of the raiders in London, and the fighting on the Matopha Hills. It may be incorrect to say that these several events have had absolutely no effect upon the market, but it is difficult indeed to specify what such effect has been and at the same time to explain one's line of reasoning. In other sections of the market nothing has transpired that could be expected to have any wide effect. Two or three companies have had special items of news for publication, but these have been few and far between, and the market has taken as little notice of them as possible.

In the complete absence of feature, which we have indicated, it is obviously unnecessary to repeat the weary tale of stagnation day by day. We therefore omit our customary review in its diary form, and pass on at once to the separate markets.

South Africans.

Chartered at 3½ are ½ better than they were a week ago, having in the interim touched 3½. The fact that the extreme fluctuations have been confined in a ½ limit emphasises more than any mere words could do the inactivity everywhere prevailing. Some attempt has been made to raise enthusiasm over the proposal of the subsidiary Colenbrander's Matabaliland Company to vote £5000 to the war expenses of the parent undertaking. The meeting to discuss this proposal will be held on Monday next. It is understood, however, that such a line of action is entirely voluntary on the part of the smaller company, no suggestion having been made that the Chartered Company desired assistance in such a form. Consolidated Goldfields have been as good as 12½, though closing no better than 12½ or ½ higher than last week. The announcement that Mr. J. Hays Hammond is to remain in the Transvaal, and has renewed his engagement as consulting engineer to the company, has been regarded as a bull point. Gold Trusts have lost ½ at 7½, but considerable strength was developed early in the week in Goldfields Deep, which advanced to 11½, closing ½ higher on balance at 11½. The immediate cause of this spurt was the announcement that on the Robinson Deep, a property in which this company is largely interested, the reef has been struck at a depth of 1800 feet and assays 3 ounces to the ton. The particular cause for satisfaction in this announcement lies in the comparatively small depth at which the strike was made. Deep level properties generally show scarcely any changes on balance. Rand Mines stand at 30½, Roodepoort Deep at 2½, Consolidated Deep and Goldenhuis Deep both at 5½, Nigel Deep at 1½, and Nourse Deep at 5½. East Rands improved to 7½ early in the week, but have since relapsed to their starting point—7½—on the hints thrown out by Mr. George Farrar in his speech at the meeting in Johannesburg, that a further issue of capital is in contemplation to extinguish the rights of the vendors. There is said also to have been a heavy seller on the Paris Bourse. A small reduction is shown in the subsidiaries, Comets closing at 3, and Angelo at 5. Anglo-French Exploration have lost ½ at 5, and small reductions are noticeable in several of the land and finance companies. New Africans, for instance, have relapsed to 3½, Oceanus to 1½, Rhodesia Exploring to 5½, Mashonaland Agency to 2, and Mozambique to 1½. The Barnato Group has kept comparatively firm, support having been forthcoming from the shop in anticipation of "Barney's" return to this country. Barnato Banks are ½ up at 2½, and New Primroses have put on a like fraction at 5½, but Glencairns have lost ½ at 3½, Spos Bons ½ at 1½, and George Goch ½ at 2½. Johannesburg Investments remain at 3½. Randfonteins are ½ down at 2½, but others of the Robinson Group have held their ground, Block B at 1½, Langhaagte at 5½, and Robinson Banks at 6. The Eckstein Group has been well maintained except in the case of Simmer and Jack. The undivided shares are a point down at 19½, whilst the new shares are ½ easier at 5. Modders have recovered ½ to 6½, and Henry Nourse have scored ½ at 6½. Citys stand at 4½, Ferreira at 2½, Geldenhuis at 3½, Heriot at 9½, Jubilee at 8½, Jumpers at 6½, Salisbury at 4, and Wemmers at 9½. In almost all other instances prices are little better than nominal. Meyer and Charlton have fallen ½ at 5½, Knight's ½ at 6½, Luipaard's Vlei ½ to 2½, Crown Reef ½ to 11½, Bantje ½ to 3½, and Village Main Reef ½ to 6½. Wolhuter at 6½, Worcester at 4½, Van Ryn at 4½, and Robinson at 9½ are all upon last week's marks. The small Lydenburg Group has been inactive, but insignificant losses are shown in Barrett's at 13s. 9d., and Lisbon's at 6s. 6d., whilst Spitzkopps remain at 1½, and Lydenburg Estates at 1½. Diamond shares have receded, De Beers closing ½ easier at 29½ and Jagers ½ down at 10½. In each case the fall has been as much as ½ since noon to-day.

West Australians.

The most sensational movement in this department, although its effects are not very far reaching, has occurred in Lake View shares. Those familiar to our readers are shares of 10s.; with 7s. 6d. paid, which have been steadily making their way in the market until they have the distinction of carrying the heaviest premium of all the West Australian properties. A new company has recently been introduced, known as Lake View Consols, the shares of which are to be exchanged for the original Lake Views in the proportion of two to one. The Consols were standing at 4½ a week ago, and to-night they close at 6½, whilst the old shares are ostensibly below parity at 11, as against 8½ last week. The explanation of these extensive movements is probably to be found in the fact that the register of the older company is kept in the colony, and delays being inevitable during the conversion, a bear account has arisen accidentally, or as the result of manoeuvre. Joint Stock Trusts have continued to attract attention, though at the close they are unchanged at 3½ premium, after changing hands at 4½. The flotation of the subsidiary Burbank's No. 1 West Company is said to have gone off satisfactorily. There has been a break in Associated which at one time to-day were not much better than 2½, although

he close at 2½ leaves them only ½ down. Sales are said to have been pressed by original allottees, members of the Coolgardie Syndicate who have only just obtained delivery of the shares that came to them in virtue of their holding in the older company. Associated Southern have lost ½ at 1½. Great Boulders have been flat to-day, closing ½ down at 6½. Some dissatisfaction was expressed at the action of the directors in allowing the company to appear as promoter of the Junction Reefs reconstructed company, with which its connection is not immediately apparent. Great Boulder Main Reefs have been offered down to 1½, which marks a loss of ½. A crushing of 339 ounces from 117 tons was not in itself sufficient to explain this weakness. North Boulders are quoted at 1½ ex the rights in connection with the subsidiary promotion. Hannan's Brownhills were specially flat on Thursday, being offered at 4½. They have since rallied to 5, which leaves them only ½ lower. Lady Loche have reacted from the bear attack to which they were subjected last week and close ½ up at 2½. Coolgardie Iron Kings have lost ½ at 1½, whilst special flatness is apparent in Consolidated Goldfields at 4. True Blues have sagged away to 4, but Hannan's North are rather better at 1½. Losses of ½ or so are the order of the day in the Menzies group, Consols close at ½. Crusoe at 1½. Gold Exploration at 2½, Florence at 1½, and Lady Shenton at 2½. White Feathers have stood their ground very well at 2, and the same may be said of the kindred undertakings. Hit or Miss remain at 2½, Wealth of Nations at 1½, Golden Cement at 1½, and Golden Crown at 2½. Bayley's Reward are 1s. 6d. better at 6s. on the reported discovery of new reef, the richest yet found on the property. West Australian Goldfields have lost ½ at 9½, Share Corporation ½ at 1½, and Mainland Consols ½ at 3½. Hampton Plains are the turn harder at 4½, after touching 5, and London and Globe, Exploring and Finance, and Colonial Finance are all rather harder at 4.

Miscellaneous.

The Miscellaneous Market has been even more of a dead letter than the other departments. Indians have eased off in the absence of support, declines of not more than ½ being found in Champion Reefs at 7½, Mysore at 7½, Nundydroog and Ooregum at 3½, and Ooregum Preference at 3½. In the New Zealand group Waihi has lost ½ at 6½, Waitakauri ½ at 5½, and Taitapu ½ at 2½. Broken Hills are unchanged at 2½, with British at 2½. Mount Lyell has been flat on the publication of the report which, although favourable enough in itself, did not encourage fresh purchases. The shares are ½ lower at 7½. Copper shares are dull, and losses of ½ to ½ are shown in Tintos at 23½, Anaconda at 6½, Libiola at 2½, and Copiapo and Cupos both at 2½.

STOCK EXCHANGE SETTLING DAYS.

CONSOLS.

Tuesday, August 4.

MINING MAKING-UP DAYS:

Monday, July 27. | Monday, August 10.

MINING NAME DAYS:

Tuesday, July 28. | Tuesday, August 11.

ACCOUNT DAYS:

Thursday, July 30. | Thursday, August 13.

NOTES FROM WESTERN AUSTRALIA.

By AN EXPERT.

KALGOORLIE, W.A., JUNE 2.

THE feature of the week in the Hannan's district has been the discovery of telluride of gold in Block 45 Mine, about 1½ mile south-easterly from this town.

This mine, an 18 acre block, is the property of the Block 45 Gold Mining Company of Adelaide. For some weeks past reports have been rife of the improvements occurring in the lode, which was said to consist of a solid body of quartz and schist 3 feet wide, yielding by assay 6 to 8 ounces per ton. A few days ago a strange mineral was noticed in the 100 foot level, which on examination by the local assayers proved to be the rare mineral—exceedingly rare, it is said, in Australia—telluride of gold. Very great interest is being taken in this and by the chemists and mining engineers of the neighbourhood, to say nothing of the speculators who literally comprise nearly the whole of the population, for nearly every working man is a dabbler in mine shares in a small way. The ore occurs in the 100 foot level in a calcite matrix, and is understood to be sylvanite, carrying 30 to 40 per cent. of gold. The main shaft is being sunk below the 100. The mine is in the early development stage, and has no milling plant at present.

BANK OF ENGLAND MINE.

The week before last the sensation was (and we look for a sensation every week, and the announcement of a discovery every morning) the striking of a very rich deposit of gold-bearing rock in one of the shafts below the 50 foot level.

The stone was certainly studded with coarse gold, with occasional small veins and strings of the metal up to ½ inch in thickness, and a large number of beautiful specimens were on view in the manager's dormitory, which was temporarily converted into a show room, as it is at present the "strong room" of the establishment.

The mine, which is a 10 acre block, a little less than ½ mile east of the Great Boulder Mine, belongs to an Adelaide Company, which has a capital of £10,000, in 20,000 shares of 10s. each. The shares have had an enormous rise, and are still about £7 5s.

South of this mine on the same line is the Coolgardie Mint and Iron King Mine, which has during the past week started its 10 head stamping mill, while north of the "Bank" is the North Boulder Mine, where they are erecting a Huntington mill and an amalgamation plant. Further reference to these two English companies' mines must be made later on.

IVANHOE.

I have only space this week to make just a passing allusion to this mine, which belongs to a colonial company. They have just intersected their east lode at the 100 foot level, and although nothing definite is allowed to leak out until the directors have had a 48 hours' start, it is understood that the lode is an exceedingly good one. The find is likely to benefit the Great Boulder as well as the Ivanhoe, for the reef runs right into one of the Great Boulder blocks.

The Ivanhoe has two other lodes; their main lode, which supplies the five head battery (10 new heads about to be erected in addition), is a very good one. They are making regular and good.

LAKE VIEW,

with its 10 stampers and excellent regular returns, is doing well. It adjoins the Great Boulder.

THE MINES BILL.—On Thursday Mr. Balfour, in reply to Sir W. Harcourt, said that the Mines Bill would be taken on Monday.

SIDE LIGHTS ON THE LAW:

Legal Jottings on Cases in the Courts, and on Questions affecting Mining, Railway, Financial, Industrial, and allied Interests.

BY A BARRISTER.

THERE was something disturbing to the quietude of the defendants who were about to take their trial at the Bar on Monday morning last in the announcement which appeared in the daily newspapers that the Committee of the Cape Parliament had made an unfavourable report as to the origin of the raid into the Transvaal. To say the least, it would have required the aptitude of the Delphic oracle to have given an auspicious turn to the omen. A decree had gone forth from the chief of the judges who are appointed for the trial of the offenders that the proceedings were not to be lightened by the presence on the Bench of the ladies of rank and fashion who have been accustomed of late years to grace celebrated trials. Lord Russell, the Lord Chief Justice, had intimated his opinion that the ladies' position was not on the Bench of Justice, and that he intended to put a stop to the practice. Some of the sensations of recent trials had, therefore, at one fell blow, been lost. Enough, however, remained behind to secure a crowded Court, although ladies were relegated to the galleries especially reserved for them. Before the jury were sworn Sir Edward Clarke, the leading counsel defending Dr. Jameson and his comrades, took objection to the indictment for the Crown. He pointed out to the Court, which consisted of the Lord Chief Justice, Baron Pollock, and Sir Henry Hawkins, that the Foreign Enlistment Act of 1870, under which the defendants were indicted, on its passing came into operation in the United Kingdom, and afterwards in other places within the Queen's dominions upon proclamations being issued. The indictment alleged that the defendants "within the limits of Her Majesty's dominions, and after the coming into operation therein of the Foreign Enlistment Act, 1870, and without the licence of Her Majesty, were engaged in the preparation of a military expedition to proceed against the dominions of a friendly state." Sir Edward Clarke objected that this was bad for ambiguity. The word "therein" required to be interpreted. It was not alleged that the Foreign Enlistment Act was in force at a place where the defendants were charged with preparing an expedition. It was consistent with the indictment that the place where the defendants were engaged was within the dominions, and yet the Act not in force, but to satisfy the requirements of the allegation in the indictment proof that the defendants were engaged in any part of the dominions, and that the Act came in force on its passing in the United Kingdom a part of those dominions, would be sufficient. If that was not the meaning of the indictment, it meant that the prosecution must prove that the Act was in operation throughout or in every part of Her Majesty's dominions. He further urged that the Act only came into operation outside the United Kingdom by proclamation, and that was a fact which was necessary to constitute the offence, and one, therefore, necessary to be alleged in the indictment; for this contention he cited several authorities of jurists—from the ancient Hawkins to the late Sir James Stephen. The Attorney-General having supported the indictment, and urged that a reasonable meaning must be given to the words used, and that it was not necessary to allege the matters as suggested by Sir Edward Clarke, the Court adjourned till Tuesday to consider.

WITH the Tuesday morning calm reflection came in the judgment of the Court delivered by Lord Russell. He said, with some meaning, in the course of careful judgment, "Even in considering a question of the validity of a criminal pleading, the Court must have some regard to the ordinary understanding of language and apply some measure of common sense to its consideration." Applying that test, he thought that the indictment contained a reasonable and intelligible statement that the defendants were engaged in a place within Her Majesty's dominions in which the Act of 1870 was in operation. He proceeded to say that the prosecution must prove that in the place in which the expedition was prepared within Her Majesty's dominions, in that place the Act was in operation. That if they fail to prove that the objection will be fatal. As to the objection that it was necessary to allege that the Act had been proclaimed, that was a matter of mere pleading, which he thought was sufficiently met by the Court seeing that the fact was properly proved. The Court intimated its view that the Foreign Enlistment Act applied to the operations of British subjects anywhere, and to both subjects and foreigners who were within the dominions. Having thus disposed of the objection to the indictment upon which rumour had placed of late so much store, his Lordship added "one word more." That word was to have a crushing effect on future criminal procedure—was to make the Jameson trial effective and historical, if in nothing else, at least as authority to be often cited, and perhaps to be productive in assisting the legislation which has been long promised for the reform of criminal law and practice. "We," said his Lordship, "have not thought it necessary to go through, although we have considered, the various cases which were cited. Many of them belong to a time when the right and justice and the substance of the thing were sacrificed to the science of artificial statement, and many of them we should not consider binding." But no one said why, if the indictment meant that the defendants were engaged at a place within Her Majesty's dominions, it did not say so. The statement seems so simple to make. With the disposal of the legal objection, the interest in a trial which a few months ago promised to be one of the most sensational of the country, but which had already begun to flag, seemed suddenly to die out.

PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

Mr. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (July 23):—The mining market has been quiet throughout the week, and devoid of any enquiry for shares on tin; being weaker, prices continue much the same. Quotations:—Basset United (Limited), 17s. to 18s.; ditto (5s. paid), 4s. 6d. to 5s.; Blue Hills, 2s. to 3s.; Carn Brea and Tincroft United (Limited), 4s. to 5s.; ditto (2s. 6d. paid), 2s. 6d. to 3s.; Devon Consols, 19s. to 20s.; Dolcoath (Limited), 18s. 6d. to 19s. 6d.; ditto (7s. 6d. paid), 6s. to 6s. 6d.; East Pool, 2s. to 2s.; Killifreth (Limited), 2s. to 2s.; Levant, 4 to 4s.; Polberro, 7s. to 8s. 6d.; West Kitty, 2s. to 2s.; Wheal Grenville, 6s. to 6s.; Wheal Kitty, 2s. to 2s.; Wheal Metal, 3s. to 3s. 6d.

Messrs. ABBOTT and WICKETT, Stock and Share Brokers and Mining Share Dealers, Redruth, write under date of July 23:—The Cornish Share Market has again been without much special feature, and business quiet. Dealings have been chiefly confined to Dolcoath fully and partly-paid, for which there has been a fair demand. Quotations herewith:—Blue Hills, 1s. to 2s.; Basset

Mines, 2s. to 2s.; Carn Brea, 2s. to 2s.; Dolcoath (fully paid), 18s. 6d. to 19s. 6d.; ditto (7s. 6d. paid), 5s. 6d. to 6s. 6d.; East Pool, 2s. to 2s.; Killifreth, 2s. to 2s.; Polberro, 2s. to 2s.; South Crofty, 2s. to 2s.; Tincroft, 2s. to 2s.; West Kitty, 2s. to 2s.; Wheal Grenville, 6s. to 6s.; Wheal Kitty, 1s. to 2s.; Wheal Metal (3s. paid), 3s. 6d. to 4s.

MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers, Queen's Chambers, 7, Market street, write July 23 (noon):—As regards railways, we need not say more than that home rails are distinctly better all round, notwithstanding later prices are by no means the best of the week, and that Americans, with few exceptions, are still on the downward side, although there are many decided rallies from lowest points touched. The active stocks in this department have come in for a lot of fluctuation—mainly down—for the earlier part of the week, but latterly they have been "plucked up" sharply. The changes enumerated below will give the few exceptions in each section. Canadians practically unaltered on balance save for rise 2s. in Pacifics. It is hardly necessary to go into daily details this week, save to remark that the Lancashire and Yorkshire Railway dividend exceeded expectations, and gave a good "fillip" to the price of their stock, but the "zenith" was soon passed, and price fell away again somewhat. A holiday feeling and the near approach of the account doubtless justifies an experience the lack of business on which figures have dropped to the small extent that they have on the past day or two; whilst in Americans it is probably the efforts to support gold which has tended to lift figures in the same time on their department.

ENGLISH RAILS.—Higher: Caledonian Deferred, 2s.; Great Easterns, 1s. 6d.; Great Northern A, 1s.; Great Western, 2s.; Lancashire and Yorkshire, 2s.; Brighton A, 2s. to 1s.; London, Chatham, and Dover, 2s. to 2s.; London and North-Western, 2s.; Sheffield Deferred, 2s.; North British, 2s.; North-Eastern, 1s. 6d.—Lower: Metropolitan District, 2s.

CANADIANS AND AMERICANS.—Higher: Trunk Third, 2s.; Canadian Pacifics, 2s.; New York Central, 2s. to 2s.; Union Pacifics, 2s. to 2s.—Lower: Atchison's Ordinary, 1s.; ditto Income Bonds, 2s.; Central Pacifics, 2s.; Milwaukee, 2s.; Denver's Ordinary, 2s. to 2s.; ditto Preference, 2s.; Louisville, 2s. to 2s.; Erie, 2s.; Ontario, 2s. to 2s.; Norfolk Preference, 2s.; Reading, 2s.

CORPORATION STOCKS AND DEBENTURES.—Higher: Manchester Three per Cent., 2s.; Manchester Three per Cent., 2s.; Oldham Four per Cent., 1s.; Runcorn Improvement, Three and a Quarter per Cent., 2s.; Southport Three per Cent., 2s.—Lower: Blackburn Irredeemable 1s. to 2s.; St. Helens Three per Cent., 1s. to 2s.

CONSOLES.—No change for money; 1s. 6d. lower for account.

COLONIAL STOCKS, &c.—Higher: Canada (£4,000,000 Loan) 1s. Some Victoria issues sellers put up, but no difference in buyers figures.

FOREIGNERS.—Higher: Argentine Funding, 2s. to 2s.; Egypt United, 2s.—Lower: Argentine Five per Cent., 2s. to 1s.; Italian Rent, 2s.; Portuguese, 2s.; Russian Series I and II, 2s.; Spanish, 2s.; Turkish Converted "D," 2s.

BANKS.—Higher: Bank of Liverpool, 2s. to 2s.; London and Midland, 2s.; National Provincial, 2s. to 2s.; Union Bank of Manchester, 2s.; W. D. and Manchester and Salford, 2s.—Lower: Imperial Ottoman, 3s. to 5s.

INSURANCE.—Higher: Palatine, 1s. 6d.—Lower: Guardian Fire, 2s.; Liverpool, London, and Globe, 2s.; London and Lancashire Fire, 1s. 6d.; Royal, 2s.

BREWERIES.—Higher: Chester's, 2s. to 2s.; Manchester pref., 2s.; Parker's Burslem, 2s. to 2s.; ditto pref., 2s. to 2s.; Springwell pref., 2s.; Tamplin's, 2s.—Lower: Allsopps, 1s. to 2s.; ditto pref., 1s.; Guinness, 2s. to 2s.

TELEGRAPHHS AND TELEPHONER.—Higher: Anglo-Preference, 2s.; Eastern, 2s.; ditto Extension, 2s.; National Telephone Debenture, 2s. to 2s.

MISCELLANEOUS.—Higher: Blackpool Pier, 5s. to 8s.; Blackpool Tower, 1s. 6d.; Bodega, 2s.; Brunner Mond, 1s.; Bryant and May, 2s.; Burnley Paper, 2s. to 2s.; Chadwick's, 2s.; Crosses and Winkworth, 2s.; Eastman's Preferred, 2s.; Household Stores, 2s. to 2s.; Jones Sewing Preferred, 2s.; Lever Bros. Preferred, 2s.; Manchester Edison-Swan Electric, 2s. to 2s.—Lower: Armitage and Sons, 2s.; Blackpool Tower Preferred, 2s. to 1s.; Bowman Thompson Ordinary, 2s. to 1s.; Bowman Thompson Preferred, 2s. to 1s.; Bradbury and Co., 2s.; Brook Bond, 2s. to 2s.; Chadwick's Preferred, 2s.; Chadwick's Debentures, 1s.; Coat's Preferred, 2s.; Henry's, 2s.; Hudson's Bay, 2s.; Spiers and Pond, 2s.; Alkali Ordinary, 1s. 6d.

LATER (4 p.m.)—Home rails drooping to-day, the declines, however, amounting only to 2s. to 2s., and this attributed to restriction of business. Of Americans much the same has to be said. Milwaukee, however, have kept pretty good, and maintained their late advance. Canadians, though very quiet, are on the firm side. Mines dull, and fractionally easier for the active concerns.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, Stockbroker and Ironbroker (July 23), writes:—During the past week the market has been quiet and prices are generally lower. Trade reports, however, continue satisfactory.

In shares of coal, iron, and steel companies there is no particular alteration to notice. Niddrie coal are at 39s., Stewart and Clydesdale 13s., and Steel Company of Scotland 5s.

In shares of copper concerns prices are lower in sympathy with the market for the metal. Arizonas declined to 5s. 6d., but have recovered to 5s. Tintos and Tharsis are also lower at 23s. and 11s. respectively.

In shares of gold and silver mines there is not much business doing, and prices are steady. Chartered have fluctuated between 60s. 6d. and 63s. 9d. East Rand, Randfontein, and Consolidated Gold Fields show little alteration. Sheba, however, are lower. Afrikander are at 34s.; African Estate, 42s.; Associated Southern, 33s. 9d.; African Recovery, 38s. 6d.; Balkis Land, 6s. 3d.; Broken Hill, 50s. 9d.; Bass and Flinders, 9s.; Brilliant and St. George, 30s.; Big Blow, 5s.; Brownhill Proprietary, 13s. 6d.; Central Exploration W.A., 22s. 6d.; Chaffers, 6s.; Caledonian, 2s.; Cartal, 9s.; Cripple Creek Pioneers, 40s.; Exploring Land and Mineral, 25s.; East Shebas, 3s. 9d.; Emma, 2s. 3s.; Golden Horse-shoe, 35s.; Ginsberg, 37s. 6d.; Hampton Plains, 9s. 3d.; Hainault, 60s.; Hannan's Group, 27s.; Klerkedorp, 16s. 9d.; Lisbon, 7s.; Mashonaland Agency, 42s. 6d.; Mashonaland Central, 17s. 6d.; Mount Charlotte, 37s.; Murchison Gift, 1s. 6d.; North Boulder, 32s.; Nolitzky, 1s.; New Steyn, 35s.; Oregum, 6s.; Otto's Kopje, 9d.; Paddington Consols, 35s.; Princess Royal, 7s.; Pardy's Mozambique, 21s. 3s.; Rand Rhodesia, 22s. 6d.; Stansope, 23s. 9d.; Sheba Queen, 6s.; Spitskop, 24s. 6d.; Taipatu Estate, 65s.; Transvaal Exploring, 21s. 3d.; United Gold Fields of Manica, 8s. 3d.; United Rhodesia, 14s.; Wentworth, 19s.; Westleigh, 7s. 6d.; West Roodepoort Deep, 21s. 3d.; West Australian Gold Concessions, 36s. 3d.; and Yerrakonda, 1s. 6d.

In shares of miscellaneous companies prices are steady. In oil companies' shares, Broxburn are at 9s.; Pampherton, 7s.; and Young's, 28s. 6d.; Castnes Kellner Alkali, 10s.; Lawes' Chemical, 5s.; and Nobel Dynamite, 16s.

EDINBURGH.

Messrs. THOMAS MILLER and SONS, Stock and Share Brokers, 69, Hanover-street, Edinburgh, report as follows under date of July 23:—Railway prices have been supported since last week's report by good traffic return. Caledonian Deferred has risen from 62 to 63s.; North British from 50s. to 50s. 9d.; Glasgow and South-Western from 14s. to 14s. 2s.; Highland from 10s. to 10s. 2s. Great

North of Scotland has declined from 12s. to 12s. 2s. Preferences continue in demand. In insurance shares, Life Association of Scotland have declined from 43s. to 42s. Standard Life from 57s. to 56s. North British and Mercantile have advanced from 38s. to 39s. In coal shares, Cowdenbeath have changed from 16s. to 16s. Niddrie and Benbar from 40s. to 39s. Steel Company of Scotland shares have risen from 5s. 1s. to 5s. 2s. Arizona Copper shares, after falling from 58s. 3d. to 52s., have recovered to 54s. 9d. Dalmeny Oil shares have declined from 16s. to 16s. 2s. Hermand Oil from 1s. 9d. to 1s. 6d. Young's Paraffin from 29s. 9d. to 28s. Distillers have advanced from 22s. to 23s. Edinburgh United Breweries from 13s. 1s. to 14s. Scottish Assam Tea have declined from 10s. to 9s.

THE METAL MARKETS.

THE METAL MARKET, LONDON, JULY 24,

Copper.

THE desire to close G.M.B. commitments continues, and during the week a great many "Bills" have cleared out—selling in the flattest moments—whilst some of those having contracts open have covered or arranged to carry forward for three months or further. Everyone seems to be making themselves independent of any possible squeeze, such as that which was at first predicted for July—but did not come off—then for August, and now is predicted for September, but which will probably come to naught. Still, in the meantime, instead of a usual, a contango, we have had a backwardation of about 1s. 3d. to 2s. 6d. on three months as against cash, though at the close this had disappeared, and three months is now again at a slight premium. The course of the G.M.B. market was as follows: on Monday steadiness was the prevailing note at first, and cash and three months were both done up to 2s. 19s. 6d. Later on cash G.M.B.'s were done down to 2s. 11s. 3d., and up to 2s. 19s. and three months down to 2s. 17s. 6d. and up to 2s. 18s. 9d., the latter price being attained on Thursday. To-day three months was done at 2s. 19s. 5d. and 2s. 20s. 6d., with a slight premium, but towards the close three months stood again at a contango of about 1s. 3d. The final values 2s. 19s. 6d., 3d. 6s., and 2s. 20s. 6d. three months sellers. The prices quoted from America are cheap, and consumers, who seem to be pretty well covered, are not tempted. It is nevertheless a fact that the present prices of refined copper are in relation to G.M.B. values ridiculously.

Tin.

Monday's market opened with a small business in Straits tin at 2s. 11s. 3d. three months, and 2s. 1s. 6d. The business was very marked on Tuesday, and again on Wednesday, and values receded to 2s. 1s. 6d., and 2s. 1s. 6d. three months, whilst Thursday brought a further loss of 2s. 9s. per ton. The turnover for the four days was only slightly over 500 tons in all, and there was no feature of interest whatever. The effect of to-day's operations has been to lower the price a little further still, and the market closes dull at 2s. 1s. 6d., and 2s. 1s. 6d. three months. Billiton tin opened at 3s. 6s. 6d. and dropped to 3s. 5s. in sympathy with the weakness here. This morning's prices were wired as follows:—Billiton, 3s. 5s. 6d. s.c. and 3s. 5s. 6d. three months; Scotch, 3s. 7s. 6d. s.c.

Pig Iron.

Scotch shipments last week were about 2000 tons, a falling-off of over 500 tons, as compared with the same week of 1895. The Glasgow market was closed on Monday. On Tuesday it opened flat at 4s. 5d. cash, 4s. 6d. being accepted later on in the same day. On Wednesday business took place at 4s. 5d. 6d., and 4s. 5d. 6d. and on Thursday at 4s. 5d. 6d. and 4s. 5d. 6d. To-day's business was at up to 4s. 5d. 6d. and the closing values are 4s. 5d. 6d. and 4s. 5d. 6d. a month sellers of Scotch, 4s. 5d. 6d. s.c. hematite, and 4s. 5d. 6d. cash Middlesbrough.

Lead.

remains quiet. Demand is moderate, and so are arrivals and offerings. The close is dull at 1s. 11s. 3d. soft foreign, and 1s. 11s. 3d. English.

Spelter

is dull with a very limited enquiry, and the close is at 1s. 11s. 3d. ordinary, and 1s. 11s. 3d. specials.

Antimony

is quoted at 2s. 10s.

Quicksilver.

Fists are quoted steady at 2s. 7s. 6d. and seconds at 2s. 6s. 6d. to 2s. 7s. 6d.

The following are to-night's (July 24) prices of metals:

	Copper	2s. 6d.	2s. 6d.
Tough cake and ingot	50 10 0	52 10 0	52 10 0
Bust selected	51 17 0	52 10 0	52 10 0
Electrolytic Copper	52 0 0	54 10 0	54 10 0
Sheets and sheathing	—	55 0 0	55 0 0

"THE MINING JOURNAL" SHARE LIST.

ABBREVIATIONS AND REFERENCES.—The following are the significations of the abbreviations and references which occur in the Share List:—*A*, Antimony; *A.*, Arsenic; *B.*, Blende; *Bz.*, Borax; *C.*, Copper; *D.*, Diamonds; *G.*, Gold; *J.*, Iron; *L.*, Lead; *M.*, Manganese; *N.*, Nitrates; *P.*, Phosphates; *Q.*, Quicksilver; *R.*, Ruby; *S.*, Silver; *&L.*, Silver-lead; *Sul.*, Sulphur; *T.*, Tin; and *Z.*, Zinc. * in the "Amount of Share" column of British Mines signifies that the address given is not that of the head office but of a sub, or transfer office; and *t.*, following the names of African Mines, signifies that they are subject to the Limited Liability Law of the South African Republic.

The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share Dealers, and our readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it to be understood that while our Share List will almost invariably be found correct, we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

AFRICAN MINES.

Name.	Closing Price, July 24, 1896	Closing Price, July 17, 1896	Am't. of Share	When last XD and Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.	E. s. d.
Abbott's Con. Reefs	6/ 7/	6/ 7/	1 C	—	1 0 0	438,000	De Kaap	Broad Street Avenue	—
Afri'n Estates	2/ 2%	1 1/16 2 1/16	1 0	2/ & 1st Oct. '95	1 0 0	175,000	—	3, Cophall-buildings	—
Gold Recv'y	1 1/2 2	1 1/2 2	1 0	1st Oct. '95	1 0 0	175,000	—	33, College Hill	—
African	3/ 11/16	3/ 11/16	1 0	—	1 0 0	1,075,000	—	34, Clement's lane	—
Alexander	19/16 11/16	11/16 11/16	1 0	1st May '95	1 0 0	40,000	Transvaal	35, College Hill	—
Adler Consolidat'd	1 1/2 1 1/2	1 1/2 1 1/2	1 0	—	1 0 0	250,000	—	1, Moorgate place	—
Alexandra Estate G	3/ 11/16	11/16 11/16	1 0	—	1 0 0	225,000	—	16, George street	—
Angelo	4/ 5/ 5/	5/ 5/ 5/	1 0	—	1 0 0	175,000	—	3, Winchester House	—
Anglo-French Exp.	4 1/2 5 1/2	5 1/2 5 1/2	5 0	7/ May 29 '96	1 0 0	30,300	—	5, Matabi	—
Matabeleland	2 1/2 3 1/2	3 1/2 3 1/2	1 0	—	1 0 0	38,750	West Cost	Winchester House	—
Appantoo ... G	—	—	1 0	—	1 0 0	77,85	—	Dashwood House	—
Aurora ... G	13/16 13/16	13/16 13/16	1 0	8% Mar. '93	1 0 0	65,000	—	2, Old Jewry, I	—
West United	13/16 13/16	13/16 13/16	1 0	—	1 0 0	100,000	—	7, Lombth	—
Austral-African ...	1 1/2 1 1/2	1 1/2 1 1/2	1 0	3/ - Dec. 15 '95	1 0 0	250,000	—	Token Ho., C. Hill & Av	—
Balkis Eersteind G	1 1/2 1 1/2	2/ 2/	3/ 3/	10/ —	0 10 0	520,000	Transvaal	85, Gracechurch-st.	—
" Land	6/ 6/ 6/	6/ 6/ 6/	10/	1/ Feb. 13 '96	0 10 0	520,000	—	8, Prince's street	—
Panties Consol ... G	5 1/2 5 1/2	3 1/2 3 1/2	1 0	1st Sep. 24 '95	1 0 0	83,000	—	15, Geo. st., Mn Ho.	—
Barnato Bank ...	2 1/2 2 1/2	2 1/2 2 1/2	1 0	—	1 0 0	2,250,000	—	7, Lombth	—
" Consol ... G	12/16 21/16	21/16 21/16	1 0	—	1 0 0	1,000,000	—	7, Lombth	—
Barrett's ... G	14/16 14/16	14/16 14/16	1 0	—	0 90 0	407,900	De Kaap	17, Basinghall-street	—
Bechuanaland Exp.	1 1/2 1 1/2	1 1/2 1 1/2	1 0	—	1 0 0	400,000	Bechuanaland	19, St. Swithin's-lane	—
" Tradg Assoc.	1 1/2 1 1/2	1 1/2 1 1/2	1 0	1/ July 15 '96	1 0 0	100,000	—	19, St. Swithin's-lane	—
Big Golden Quarry	1/6 1/6	1/6 1/6	5/ —	—	0 50 0	483,226	Kaap Mvr	Warrford Court,	—
Block "B" Lang.	11/16 21/16	11/16 21/16	1 0	—	1 0 0	515,000	Rand	8, Prince's st., E.C.	—
Bonanza	2 1/2 2 1/2	2 1/2 2 1/2	1 0	—	1 0 0	2,000	Turftown	120, Bishopsgate-st.	—
Brit. A. Char.	3 1/2 3 1/2	2 1/2 2 1/2	1 0	—	1 0 0	99,750	S. Africa	1, St. Swithin's-lane	—
Buffelstroom ... G	2 1/2 2 1/2	2 1/2 2 1/2	1 0	—	1 0 0	250,000	Potchefstr	7, Lombth	—
" Central	3/ 3/ 3/	3/ 3/ 3/	1 0	—	1 0 0	—	8, Old Jewry	—	—
" Consolidated	3/ 3/ 3/	3/ 3/ 3/	1 0	—	1 0 0	225,000	—	Warrford Court	—
Cape Asbestos	3/ 1 3/ 1	3/ 1 3/ 1	1 0	—	1 0 0	50,311	Orange Rv	19, St. Swithin's-lane	—
" Copper ... C	2 1/2 2 1/2	2 1/2 2 1/2	2 0	2/ June 12 '96	2 0 0 0	30,000	Cape Col.	9, Queen-street-place	—
" 5% Pret. ...	2 1/2 2 1/2	2 1/2 2 1/2	2 0	2/ June 12 '96	2 0 0 0	45,000	—	9, Queen-street-place	—
Cassel Consol.	1 1/2 1 1/2	1 1/2 1 1/2	1 0	1/5 Apr. 29 '96	1 0 0 0	75,000	Johannbrg.	29, Cannon-street,	—
Cer. de Kaap	1/2 1/2	1/2 1/2	5/ —	—	1 0 0 0	200,000	De Kaap	Palmerton Bldgs.	—
" Hoopdt Deep	4 2/16	2 2/16	1 0	—	1 0 0 0	220,000	—	120, Bishopsgate st.	—
Champ d'Or ... G	2 1/2 2 1/2	2 1/2 2 1/2	1 0	3/2 Feb. 27 '96	1 0 0 0	116,016	and	8, Old Jewry, E.C.	—
Chaterland G.F.	9/16 11/16	5/ 5/	1 0	—	1 0 0 0	150,000	—	19, St. Swithin's-lane	—
Chimes West	1 1/2 1 1/2	1 1/2 1 1/2	1 0	—	1 0 0 0	150,000	—	19, St. Swithin's-lane	—
City and Sub. N.W.G.	4/16 4/16	4/16 4/16	4 0	10/ - June '95	4 0 0 0	340,000	Rand	13, Lombth	—
Con. Bultfontein D	3/16 3/16	2/16 2/16	1 0	1/9 Jan. 18 '96	1 0 0 0	721,500	Transvaal	32, Lombth	—
Con. Deep Levels G	5 1/2 5 1/2	5 1/2 5 1/2	1 0	10/ May 14 '96	1 0 0 0	200,000	Transvaal	30, St. Swithin's-lane	—
Con. G. Fields S.A.	12/16 12/16	12/16 12/16	1 0	10/ May 14 '96	1 0 0 0	1,248,999	S. Africa	8, Old Jewry	—
Do. 5% X. Pret. ...	1/2 1/2	1/2 1/2	1 0	1/15 June 26 '96	1 0 0 0	610,000	—	12, Old Jewry	—
Do. 5% X. Deben. ...	1/2 1/2	1/2 1/2	1 0	1/5 July 1, '96	1 0 0 0	—	—	12, Old Jewry	—
Crown Deep ... G	11/16 11/16	11/16 11/16	1 0	—	1 0 0 0	250,000	Rand	120, Bishopsgate-st.	—
" Steel ... G	11 1/2 11/2	11/16 11/16	1 0	0/ - Apr. 29 '96	1 0 0 0	120,000	—	120, Bishopsgate-st.	—
De Beers Consol. D	20% 20% ad	20% 20% ad	5 0	12/ - July 15 '96	5 0 0 0	759,791	Kimberly	52, Lombth-street.	—
Do. 5% 1st Deb. ...	10/ 10/	10/ 10/	—	3/2% Apr. 1/96	—	23,500,000	—	120, Bishopsgate-st.	—
Doornkop	5/ 8/	3/ 3/	1 0	—	1 0 0 0	450,000	Doornkop	Warnford Court	—
Driefontein	2 1/2 3 1/2	2 1/2 3 1/2	1 0	—	1 0 0 0	175,000	Doornkop	19, St. Swithin's-lane	—
Durban Roodept. G	7 7/8	6 7/8	7/8 7/8	3/ - June 26 '96	1 0 0 0	125,000	Band	26, Leadenhall-bldgs.	—
" Deep	4 4/16	4 4/16	—	—	—	—	—	—	—
Eastleigh	5/ 11/16	1 1/2 1 1/2	1 0	—	1 0 0 0	240,000	Klerksdorp	52, Lombth-street.	—
East Orion	3/ 16 3/ 16	3/ 16 3/ 16	1 0	—	1 0 0 0	275,000	Band	8, Old Jewry	—
Exploration	3 3/4	3 3/4	3 3/4	1 0	—	50,000	—	170, Winchester-ho.	—
Exploring L & M.	15/16 15/16	15/16 15/16	1 0	5/ - Mar. 12 '96	1 0 0 0	142,000	Transvaal	30, St. Swithin's-lane	—
Ferreira	20/16 21/16	20/16 21/16	1 0	1/ Mar. 12 '96	1 0 0 0	45,000	Band	120, Bishopsgate-st. Wn.	—
French Hand	21/16 21/16	21/16 21/16	1 0	—	1 0 0 0	480,000	Band	12, Aus in Fairs,	—
Goldenbulb Deep G	5 5/16	5 5/16	5 5/16	1 0	—	85,000	Transvaal	30, St. Swithin's-lane.	—
Goldenbulb Est. G	3/16 3/16	3/16 3/16	1 0	6/ - Jy 26 '95	1 0 0 0	187,500	Band	120, Bishopsgate-st. Wn.	—
" Main Reef	1 1/16 1/16	1/16 1/16	1 0	2/ Feb. 13 '96	1 0 0 0	150,000	—	8, Old Jewry	—
George Goch ... G	2 1/2 2 1/2	2 1/2 2 1/2	1 0	—	1 0 0 0	100,000	—	170, Winchester-ho.	—
Ginsberg New ... G	12/16 12/16	12/16 12/16	1 0	—	1 0 0 0	130,000	Drietfont.	19, St. Swithin's-lane	—
Glencarn ... G	3/16 3/16	3/16 3/16	1 0	2/6 Feb. 13 '96	1 0 0 0	200,000	Band	2, Drapers-gardens.	—
Golden Dove	1/2 1/2	1/2 1/2	1 0	—	1 0 0 0</td				

"THE MINING JOURNAL" SHARE LIST—(Continued)

AUSTRALIAN AND NEW ZEALAND MINES.

Name.	Closing Price, July 24, 1896.	Closing Price, July 17, 1896.	Am't. of Share	When last XD and Dividend.	Called up per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
Achilles Gld. Fld.	2/6 3/	2/6 3/	2/6	—	0 2 6	642,458	Otago, N.Z.	11, Poultry, L'kn'N.S.W.
Audubon Lamp G	13/4 1/4xd	11/16 1/16xd	1 0	1/ July 15 '96	1 0 0	100,000	—	4-6, Throg. Avenue.
Anglo-Con. G. Sys	23/4 2/4	23/4 2/4	1 0	100 2/95	1 0 0	99,000	—	22, Austin Friars.
Anglo-Founders...	35 45	55 45	1 0	24/16 2/5d 95	1 0 0	1,000	—	W. Austral 73, Queen Street.
Anglo-French Exp.	76 15/4	76 15/4	1 0	5/ Oct. 30 '95	0 10 0	40,000	—	—
Anglo-Ger. Expl.	14/11/4pm	76 15/4	1 0	5/ Oct. 30 '95	0 10 0	50,000	—	—
Arrow Brownhill G	2/6 3/	3/4 7/6	1 0	—	1 0 0	90,000	Cool., W.A.	4, Gt. Winchester St.
Assoc. Gold Mines	2/6 3/	3/4 3/6	1 0	bo June 25 '96	1 0 0	375,000	Gypm. Qld	20, Bucklersbury
Australian.....G	3/6 4/	3/4 4/	20	—	1 0 0	10,000	8, Austral.	6, Queen-st. place
Australian.....C	—	—	—	—	1 0 0	22,708	24, New Broad-street	2, New Broad-street.
Aus. Brist. Hill Co.	1/9 2/3	2/3 2/9	1 0	1/—June '91	0 19 3	22,708	Bar. R.N.W.	Winchester House.
Baker's Creek G	3/6 7/6	5/6 3/4	1 0	1/—May '95	0 17 6	55,000	H'gvlnSW	Hillgrove, N.S.Wales
Bailey's Howard G	5/9 6/3	3/6 4/	1 0	—	1 0 0	480,000	Faby. H. B'l'm'd St.	Faby. H. B'l'm'd St.
Big Blow.....G	3/6 4/6	3/6 4/	1 0	—	1 0 0	150,000	Coolgardie	151, Cannon Street.
Black Flag Consd.	11/4 2/16	2 8/4	1 0	—	—	—	W. Austral.	4, Bishopgate St. Wn.
Proprietary	36	56 3/4	1 0	—	1 0 0	140,000	Coolgardie	1, Metal Exch. Bldgs
Bisgrove Freshfield G	3/3 3/9	3/8 4/	2/6	—	0 2 6	500,000	Otago, N.Z.	Dashwood House.
Blue Spur and G. G.	10/—11/	10/—11/	1 0	—	1 0 0	82,298	Otago, N.Z.	6-8, Great St. Helen's
Bonnie Dundee G	7/—8/	7/7 8/7	1 0	—	0 18 6	120,000	G. T. Q. Lane	16, S. Helen's Place
Billabong.....G	3/6 1	2 1/2	2 0	4/ June 24 '96	2 0 0	250,000	—	Charters Towers.
Block.....G	13/4 15/4	13/4 15/4	1 0	—	1 0 0	70,000	—	16, S. Helen's Place
St. Geo. G	13/4 15/4	13/4 15/4	10/	—	1 0 0	72,000	—	Charters Towers.
Brit. Brok. Hill S	3/6 1	3/6 1	1 0	—	1 0 0	240,000	N.S. Wales.	Dashwood Ho., E.C.
Broad Arrow G	2/9 3/3	2/9 3/3	5/	—	0 5 0	100,000	W. Austral.	57, Moorgate Street.
Broken Hill Prop. & G.	2/5/2 2/5/2	2/5/2 2/5/2	1 0	1/ Jun. 28 '96	0 10 0	980,000	W. Austral.	3, Gt. Winchester st.
Brownhill Prouty G	3/6 3/4	9/6 11/8	1 0	—	1 0 0	125,000	W. Austral.	4, Gt. Winchester St.
Burbank's Birthday G	13/4 13/4	13/4 13/4	1 0	—	1 0 0	150,000	Coolgardie	Cophthal House.
Cassidy Hill G	13/4 15/4	13/4 15/4	1 0	—	1 0 0	115,000	—	9-10, King Street, E.
Central Boundary G	3/6 3/4	3/6 3/4	1 0	—	1 0 0	93,522	W. Austral.	K'gtr. St. WA.
Exp. & Invst. Disparis	1/—1/6	1/—1/6	1 0	4/23 Mar 12 '96	1 0 0	122,000	W. Austral.	1, Met. Exch. Bldgs
" of W. A.	1 1/6	1/—1/6	1 0	1/7/24 Mar 27 '96	1 0 0	—	2,	—
Charters Tow. G	1/3 1/9	1/3 1/9	13/4	—	0 9 6	260,000	Queensland	110, Cannon Street
Consolidated	1/9 1/3	1/9 1/3	10/	—	0 10 0	320,000	W. Austral.	110, Cannon Street
Colonial Finances	2/6 4/4pm	2/4 4 pm	1 0	10/ Mar. 27 '96	0 10 0	21,140	—	75,250
Gold Fields	2/6 1/2	2/6 1/2	1 0	—	0 12 6	246,779	—	70, Cornhill.
Con. G. M. of W. A.	2/6 2/10	2/6 2/10	1 0	—	1 0 0	225,583	—	36, Moorgate Street.
Murchison	3/6 2/8	3/6 2/8	1 0	—	1 0 0	—	Murco., W.A.	Broad Street House.
Contl. & W.A. Trust	1 1/6	1 1/6	10/	—	1 0 0	104,457	W. Austral.	Broad Street House
Coolgardie Gold G	13/4 13/4	13/4 13/4	10/	—	0 5 0	90,000	W. Austral.	Broad Street Avenue
" Mint & K.N.C.	13/4 13/4	13/4 13/4	10/	—	1 0 0	150,000	Queensland	30, S. Switlin's-in.
Craven' Cal.	1/6 2/8	1/6 2/8	4/	—	0 4 8	100,000	Hann's W.A.	30-1, S. Switlin's-in
Oreosu. Co. United	13/4 13/4	13/4 13/4	1 0	—	1 0 0	150,000	—	Biomfield House
Crown United....	13/4 13/4	13/4 13/4	1 0	—	1 0 0	75,000	Queensland	110, Cannon-st., E.C.
Cumberland (New) G	7/—7/9	7/—7/9	1 0	—	0 19 0	184,890	Queensland	Biomfield House.
Day Dawn & W.G. F. C. G.	14/3 14/9	14/4 14/8	1 0	—	0 10 0	498,400	W. Austral.	Broad Street House
"	3/0 4/3	4/4 4/6	1 0	—	0 10 0	490,000	—	—
Eaglehawk.....G	1/ 1/8	1/ 1/8	1 0	—	0 18 0	120,000	Victoria ... Mt. Margr.	71-72, King Wm. St.
Eagle's Nest.....G	3/6 1	7/6 1	1 0	—	1 0 0	2,500	—	Finsbury House.
Explorers Synd.	3/6 36 pm	3/6 36 pm	1 0	2/8 April 29 '96	1 0 0	9,000	W. Austral.	Cophthal House
Fingall M's. Extd	1/6 9/16	1/6 9/16	1 0	1/4 Jan. 16 '96	1 0 0	150,000	—	4, Sun Court
Florence.....G	1/6 2	2/6 2/6	1 0	—	1 0 0	60,000	—	16, S. Switlin's-in
Gibraltar Cons.	11/4 13/4	13/4 13/4	1 0	—	1 0 0	300,000	N.S. Wales.	6, Queen-street-place
Gladiator.....G	1/6 1	1/6 1	1 0	—	1 0 0	—	W. Austral.	43, Threadneedle St.
Glenrock.....G	1/6 2/	1/6 2/	1 0	—	0 8 0	225,000	W. Austral.	3-5, Queen-st. E.C.
Golden Cement G	1 1/4	3 1/4	1 0	—	1 0 0	175,000	W. Austral.	3, Princes Street, EC
" Crown. G	2 2/4	2 2/4	1 0	—	1 0 0	100,000	—	54, Old Broad Street
" Gate.....G	1/6 1/2	1/6 1/2	10/	—	0 10 0	150,000	—	34-36, Gresham-st.
" Horse Shoe.....G	13/4 13/4	13/4 13/4	1 0	—	1 0 0	90,000	W. Austral.	13-14, Helen's Place
" Link.....G	13/4 13/4	13/4 13/4	1 0	5/—Oct 30 '95	1 0 0	120,000	—	19-20, King Street, E.C.
" Plum.....G	13/4 13/4	13/4 13/4	1 0	—	1 0 0	80,000	—	4, Bishopsgate Street
Gold Estates.....	2/6 2/6	2/6 2/6	1 0	3/ June 12 '96	1 0 0	240,000	Yillgar...	20, Bishopsgate-st Wa
Great Boulder...G	6/4 7	7/4 7	1 0	4/ Arts Jn. 12 '96	1 0 0	—	W. Austral.	3, Gracechurch St.
" Junction	1 1/4	1 1/4	1 0	—	1 0 0	—	3, Princes Street.	3, Gracechurch St.
" M'n R's	13/4 13/4	13/4 13/4	10/	—	0 10 0	240,000	—	Broad Street House.
Fingall R's.	11/4 12/12	12/12 12/12	1 0	5/ Jan. 16 '96	1 0 0	175,000	Kurnalpi	13-14, Abchurch in.
Gresham Synd.	3/6 2/6	3/6 2/6	1 0	4/ &bo. Jn. 12 '96	1 0 0	50,000	W. Austral.	82, Gordon st., Glas.
Hainault.....G	2/5/2 2/5/2	3/4 3/4	1 0	—	0 20 0	—	—	9, Mildred's Ct.
Hampton Gold Flds	13/4 13/4	13/4 13/4	1 0	—	0 20 0	—	—	9-11, Gracechurch st
" Gold Hill	13/4 2/3	1/6 2/1	1 0	—	0 10 0	—	—	29-31, Gracechurch st
" Plains.....G	4/5 5	4/4 4/7	1 0	rits May 14 '96	1 0 0	300,000	Cool. W.A.	10, S. Switlin's-in
" PlainsEx	7/7 9	7/8 9/1	1 0	—	0 18 0	180,000	—	21, Cannon-st., E.C.
Hannan's Brown Hill	13/4 5/14	5/14 5/14	1 0	—	0 10 0	65,000	—	51,107
Dev'lpm't	13/4 1/2	13/4 1/2	1 0	—	0 10 0	147,000	Kalg. W.A.	5, Moorgate-st. bldgs
Main R'sf.	10/ 11/	11/6 12/6	10/	—	0 10 0	—	—	18, S. Switlin's-in
North.....G	13/4 13/4	13/4 13/4	10/	—	0 10 0	—	—	33, Cornhill
100 Acre.....G	2/6 1	1 1/4	1 0	—	0 10 0	—	—	33, Cornhill
Oroyo.....G	13/4 13/4	13/4 13/4	1 0	—	0 10 0	—	—	33, Cornhill
Prop.	2/6 2/6	2/6 2/6	1 0	—	0 10 0	—	—	33, Cannon Street.
Reward....G	2/6 3/4	2/6 3						

PARIS LETTER.

Outlook of the Mining Share Market.—Position of Kaffirs.—Revival of mining enterprise abroad.—A case of interest to speculators.

THROUGHOUT the Mining Market speculation is at a very low ebb, and there are few indications that a recovery may take place shortly. The quietude has, of course, at the same time, had the effect of damping the ardour of the investing public, which are buying up mining shares on a very limited scale. Confidence, however, is being freely expressed in the future of the market. If the public does not think that the moment is opportune for investing in mining securities, it is, at any rate, not disposed to sell while the market is in its present condition. There is a general impression that gold mining shares are destined to undergo a very large inflation once the difficulties that at present weigh over the Transvaal industry are entirely removed, and thus, in spite of the disinclination of the public to take up the shares, the prices are remaining at a much more satisfactory level than they would otherwise. The reports that continue to be received from the Transvaal help to convince investors that the Rand Mines are on the eve of an "unparalleled prosperity," and that holders of shares may hope to secure an increased return on their capital. This week, M. Henrotte, the Vice-Chairman of the Banque Française de l'Afrique du Sud, has returned to Paris after a sojourn of some weeks on the Rand, where he has inspected the auriferous resources of that territory, and he expresses his firm conviction that the wealth of the mines has been in no way over-estimated; but, if anything, it surpasses the predictions that have been made concerning these properties. People here are, of course, liable to discount a too rosy picture of the Rand, but all the same the opinion of an independent observer is not without a certain influence in strengthening the public confidence. The future of the industry is also held to be further assured by the abundance of labour and the projects now being considered by the Banque Française or increasing the water supply of Johannesburg, and in other ways assisting mining operations. Nothing definite is being made known as to the numerous projects which this syndicate is reported to have in hand, but it seems that it has its finger in a good many industrial and financial undertakings which are believed to be of a very profitable character.

Despite the more encouraging outlook which it is sought to give to the Transvaal mining industry, investors and speculators are not inclined to enter upon the Kaffir market yet awhile. The professional gambling element is indeed leaving South African shares severely alone, until such time as the Stock Exchange should give the cue for a general rise. The only speculation going on is as to when this inflation will take place. The brokers acknowledge that a good many of the shares are quoted at a lower price than is warranted by their dividend-paying value, and they have the conviction that an advance must inevitably take place. They do not, however, look forward to any recovery until after the holiday season, when it is fully expected that a greater activity will begin to manifest itself in all descriptions of mining shares. For the moment there is little doing in any of the South African securities, and prices are pretty much the same as they were a week ago. On Thursday, the quotations for the leading shares dealt in were as follows:—Buffelsdoorns, 70 francs 50 c.; Chartered, 80 francs 50 c.; East Rands, 191 francs 50 c.; Ferreira, 531 francs; Gold Fields, 318 francs 50 c.; Kleinfonteins, 85 francs 50 c.; Langlaagte, 134 francs; Randfonteins, 72 francs; Robinson Mines, 234 francs; Shebas, 51 francs; Transvaal Consolidated, 50 francs 50 c.

One of the most promising indications of the market just now is the attention being given to mining enterprise in all parts of the world. So far as the general public is concerned, the Transvaal continues to hold full sway as a field for profitable investment, but the great financial bodies have long been turning their attention to other countries where there is a free scope for the employment of capital. An attempt is being made here and there to waken up interest in the gold fields of Westralia and New Zealand, where, for some time past, French engineers have been engaged in spying out the auriferous richness of the land. Nothing is yet known as to the result of these visits, but if the inspired paragraphs count for anything it is to be assumed that the syndicates will before long interest themselves directly in some of the Westralian enterprises. A good deal of activity has also been shown for some months past in securing metalliferous concessions in China, but the companies do not seem so far to have met with any notable success. This week the Société Française d'Exploitations Minières, which was lately formed with a capital of half a million francs under the auspices of the Syndicat d'Etudes Industrielles et de Travaux Publics on China, has sent a delegation to interview Li Hung Chang on the probability of securing concessions in the Celestial empire. According to his word, the ex-Prime Minister of China promised all that the delegates asked of him, and expressed his firm intention of freely granting concessions of the supposed vast mineral territories which have so far remained untouched. In Russia also, French capital is particularly busy just now. The Société des Mines d'Or de la Russie (Rossiskos) has secured a very large interest in two important undertakings, one the Lena Gold Mine, which is paying extremely profitable dividends, and the other the Angoum concern, which is working some of the richest placer deposits in the Amour district. The company has lately sent an expedition to Western Siberia with a view of exploring the mineral territories in that country. The greatest confidence is expressed in the future of this concern, which is practically covering the whole of the richest auriferous territory in Russia.

The company, which was formed about three years ago, to work some supposed marvellous gold deposits in Siam, is passing through a good deal of tribulation. One of the leading shareholders recently brought an action against five directors of the Watana Company for alleged fraudulent misrepresentations. The plaintiff, M. Prudhomme, purchased shares in the mine for 338,300 francs, but they depreciated to such an extent that he sustained very heavy losses. Soon after the company was formed the shares were inflated by vigorous puffing to more than 1000 francs, and to-day they can hardly find purchasers at 125 francs. The plaintiff asserts that he was induced to purchase the shares through the statements published by the defendants, which statements gave a highly-coloured picture of the Watana Mine, and contained references to certain analyses of auriferous quartz, showing a yield of 6 kilos 753 grammes and 2 kilos 507 grammes of gold to the ton. These statements he claimed to have been fraudulent and made with a view of deceiving the public. Moreover, he affirmed that the defendants floated the company solely with a view of extracting money from investors. Under these circumstances, he claimed damages for the losses that he had sustained. It appeared that M. Prudhomme had tried to realise his shares at a profit through the medium of the Press, and the Court thus held that as he was a speculator, who would have made no claim upon the directors in the event of his making a profit,

he had no *locus standi* in the present case. The Court had not, it said, to consider the irregularity or otherwise of the Watana Company, and it could not see that the manoeuvres attributed to the defendants constituted a fraud. Moreover, the plaintiff had engaged in a reckless speculation, and could have no claim upon the defendants, in whose favour accordingly judgment was given. The case has attracted considerable attention in Paris, as it is held to very materially affect the position of speculators in gold mining companies.

CORRESPONDENCE.

* We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.

THE ZYMEAN PROCESS.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR.—I beg to crave your indulgence for further opportunity of making some remarks on Admiral Selwyn's letter in yours of the 11th inst. Duties prevented me from giving it due attention earlier.

In reference to the formation of sodium sulphate as named in my last letter, the Admiral says that he is "not able to explain accurately the reaction taking place, nor has any chemist yet undertaken to do so." If I comprehend the Admiral correctly on the elimination of free Cl from strong NaCl solution, then it must be by the process of decomposition, something is added which by its surroundings is enabled to attach the sodium in the NaCl, and so liberate free Cl. Now in all cases of this nature I take it that decomposition is followed by recombination, and a new compound is formed in the vat or tank which was not there before. This is confirmed by all the manufacturing experience in Cl production. In the year 1860 a process was in operation at a chemical works, near to my residence, called Longmaid's, which in many respects was a success, but owing to the loss of sulphuric acid did not come into general use. This process consists in roasting pyrites and salt in a reverberatory furnace, with access of air, sodium sulphate, ferric oxide, and chlorine being the products. The reaction was thus represented: $4\text{FeS}_2 + 16\text{NaCl} + 19\text{O}_2 = 2\text{Fe}_2\text{O}_3 + \text{Na}_2\text{SO}_4 + 8\text{Cl}_2$. From the residue the sulphate of sodium is separated by lixiviation, and the residual ore treated for copper, silver, and iron. The silver precipitated in the works above-named was over 2 per cent, and also contained some gold. The copper was made into sulphate, and the iron oxide made and sold for paint.

About the year 1874, Mr. Hargreaves, of Widnes, worked out a process for the direct manufacture of sodium sulphate by passing sulphuric acid, air, and steam over common salt heated to about 800° Fahr. The following reaction represents what takes place: $2\text{NaCl} + \text{SO}_3 + \text{O} + \text{H}_2\text{O} = \text{Na}_2\text{SO}_4 + 2\text{HCl}$. Processes could be multiplied which show that sodium sulphate is formed in chlorine production when sulphur compounds are used.

In the face of these facts, I am strongly led to believe that the Admiral's process is no exception—that is, if the solution of NaCl be decomposed; if not, then there is only one source, and that the S_2Cl_2 , and it is not to be wondered at, seeing that 10 grains of flowers of sulphur will absorb nearly 30 cubic inches of chlorine gas. However, I am open to conviction, which time and experiment alone will do, for chemists who take nothing on trust must work out for themselves before being satisfied. The process itself, however, for metal extraction has astonished me, and whatever be the real chemical changes that take place, I consider it by far the first in the market. The remainder of the Admiral's letter goes unchallenged. It abounds with sound experience and sound sense, and it is profitable to all persons interested in mining operations. By the way, what has become of Mr. Tapp, of Bucklersbury? He promised us an exposé of the process on a large scale, but nothing can be learned of him. Now, Mr. Tapp, a promise is a sacred thing, and having given us one we must hold you to it.

St. Helens, Lancashire.

JAS. W. WORSEY.

PORT PHILLIP GOLD COMPANY.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR.—The shareholders of the above company were called together on the 10th inst. by the directors, who had apparently been indulging in a slumber since reconstruction, to force a sanction to a cut-and-dried proposal of amalgamation with, or rather purchase, by increasing our capital from £50,000 to £100,000 for acquiring a comparatively unknown property in the Broad Arrow district, West Australia.

This prospecting claim is held by the Idaho Exploring Company, whose Chairman is also Chairman of the Port Phillip Company.

Mr. Power, Chairman of both companies, and some of his co-directors, act in the dual capacity of buyers and sellers, and are wanting to saddle the Port Phillip Company, which is a well-proved mine, with a splendid record in the past of over £2,000,000 sterling in gold produced, and good prospects in the future if properly worked, with a claim of doubtful value in West Australia.

I have no high opinion of the valuation of the mine by our very disinterested amateur mining directors, which they so kindly fixed at £58,000, to be paid £6000 in cash and mortgage, and £50,000 in fully-paid shares. Thus, in other words, a well-known gold property in Victoria—the Port Phillip Company—with deep shafts, extensive plants and machinery, and large quantities of ore available for working, is asked to amalgamate with an unknown and practically unheard of property in West Australia.

The Chairman of the Port Phillip Company talked about looking after the interests of the company, and not wasting time or money by formulating schemes that have no chances of success. Instead of this he is cleverly looking after his own interests by wanting to force a purchase of a claim in which he is largely interested on to the shareholders of the Port Phillip Company, but myself and others will not consent to such a blundering policy being carried out.

The statement sent out to the shareholders with the notice of last meeting on the 2nd inst. contained, I consider, statements of a misleading nature as to the character of the property proposed to be acquired, and calculated to delude unwary shareholders into the belief that the stone would average 33 1-3 ounces of gold per ton, on the basis of a piece of stone 3 lbs. weight assaying at that rate. While the facts were suppressed that the directors of the Port Phillip were also directors of the Idaho Exploring Company and the real vendors. Had the directors acted rightly, they should have disclosed these facts, and then they would not have had so many proxies sent into them for use.

If the Port Phillip Mine is not worked properly, we shall pro-

bably lose it, the Mining Department will not allow "a dog in the manger" policy to be long carried on.

Had the amalgamation as I arranged for been carried out, the mines would have been in work and producing gold long since, and probably from 400 to 500 miners put into profitable work. The combination effected after so much trouble was pronounced by all practical men, who knew the value of the Clunes gold fields, to be the most valuable group of mines that could be acquired in Victoria. Knowing the history, condition, and value of the Clunes Mines probably better than any one in England, and how they should be worked, I can but express my regret and astonishment that shareholders should be led into such a scheme to pay dearly for the uniting with an unproved property in West Australia, whilst our property is kept in idleness.

As the shareholders are again called to a meeting on the 27th inst. to confirm the resolution passed by proxies obtained from shareholders who were unaware of the facts of the case, I especially caution them not to give proxies in favour of confirmation of the proposal, but to attend the meeting in person, if possible; or, if they oppose the action of the directors, send their proxies to myself or some other shareholder who objects.

Yours, &c.,
54, New Broad-street, E.C. THOMAS CORNISH, M.E.

MINING IN CARDIGANSHIRE.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR.—For many years past mining in this county has been a tale of the past, but after so many years it is again now beginning to awake out of that long sleep, and already some few mines have changed from idleness to real work. I cannot but rejoice to see such a change, and I can no longer doubt that I may yet see mining in all its glory, as it was in the good old days of 50 years ago. At that time mining was the mainstay of this county, the old Goginan, in her prime, selling from 200 to 300 tons of rich silver lead ore monthly, realising a clear profit to the company of about £10,000 a year, so that for the six years that we were there £60,000 of profits was made. To the west of this mine nothing was ever done. Not a pick was ever thrown into the soil in search of mineral, as the proprietors thought so much of their ground that they positively refused to grant permission to any person. Now that their houses throughout the length and breadth of the valley have become empty, all hands having gone southward amongst the coal fields, the houses have now become dangerous to live in, and all the beautiful and flourishing gardens are a wilderness. The lords are now beginning to see these things, and are willing to grant their lands to respectable companies, with the hope of their villages being again occupied.

I may at some future time mention a few of the mines now in existence, and point out to the readers of your paper a favourite spot or two certain to meet with success. In fact, there are few mines in this county that may be carried on to success if under the guidance of an experienced mining engineer. Yours, very obediently,

SAMPSON TREVETHAN, Consulting Mining Engineer.

Capel, Bangor, near Aberystwith.

COMPANY FINANCE.

Reports, Balance Sheets, Dividends, &c., of Mining and other Companies.

NEW ZEALAND EXPLORATION COMPANY (LIMITED).

The following circular has been sent to the shareholders by the New Zealand Exploration Company:—Circular No. 1. To the shareholders of the New Zealand Exploration Company. Dear Sir or Madam,—Having up to the present published no reports about our subsidiary companies, it is now our intention to issue in future at such intervals as circumstances may direct circulars to our shareholders containing a summary of the work done at the respective mines under the control of our company. —New Zealand Crown Mines. As you are aware, this company was registered on June 27, and is an amalgamation of the well-known New Zealand Crown Mines and the Earl of Glasgow. The mine manager reports that the mine never was in a better shape than at present, and the prediction made by the various experts that the reef would improve in size and value with greater depth is more and more realised in the present workings below No. 6 level, where the reef shows a width of from 6 to 7 feet, carrying visible gold. The average value of the ore is £4 2s. per ton. A cable from the mine manager just received announces the crushing for June as follows:—"472 tons of ore crushed and treated; assay value of bullion recovered, £2225." Although the yield is larger, the tonnage of ore milled is less than the average of the first five months of this year, which, however, is accounted for by a stoppage of several days, owing to a flood which damaged the water-race. Everything is now running smoothly, and the manager cables that the additional 20 stamps (making 40 stamps in all) will be at work towards the middle of August. Further 20 stamps will be ordered in the near future.—Earl of Glasgow section. The prospecting tunnel is pushed ahead, and is now in 535 feet.—Aroha Gold Mine. This property is now being systematically developed; its entire area is 296 acres, with the main reef running through it for a distance of 2 miles. The previous owners had worked it at several points (New Find, Colonist, and Premier), and the present company is resuming operations at greater depths, in order to prove the value of the large bodies of ore existing on the property. This is now being done in the Premier section, and similar work is now being started in the New Find section. The board is also considering the question of erection of machinery for treating the ore, and is taking the advice of experts on the matter.—New business. The company has the option over a large tract of country, freehold and leasehold, extending over 100,000 acres in the centre of the Hauraki peninsula. A large portion of this tract of land has been already proved as auriferous. Prospecting operations and negotiations for the title of this valuable concession are being proceeded with. The company has also acquired interests in shares in a few promising properties which are being rapidly developed.

ROBURITE EXPLOSIVES.

The report of the directors for the year ended December 31 last states that they have delayed presenting the accounts up to the present time on account of the legal proceedings which have been forced upon the company during the last 18 months. The circular and newspaper reports which the shareholders have received have put them in possession of all the particulars of these proceedings, terminating in the unanimous judgment of the three judges of the Court of Appeal in favour of the company. Nevertheless, the Lancashire Explosives Company have presented a petition of appeal to the House of Lords. As judgment on this appeal cannot be rendered for some months, the directors have determined to call the meeting without further delay. In view of the litigation, they convened early in March an informal meeting of a considerable number of the principal shareholders, and obtained their

from the
Ze
Vu
so
36
ne
sec
an
cal
ba
just
sta
B
23
offi
mai
No
24
min
ave
B
insta
rich
C
Cab
ton
of c
mor
wor
insta
it w
sta
1500
able
this
exp
satis
gold
B
the n
"Cru
conta
qua
sider
erect
prov
BL
re
CA
from
"We
Caled
as po
bound
CA
—The
Hon.
well
the n
further
CH
the n
July 8
Chole
CH
cable
stone
that t
90 feet
feet a
determ
CON
been
full op
ment
every
CRO
ing cal
July 2
of min
OLY
manag
great
week i
spend
DIX
from t
on wi
indicat
EJU
receiv
agents i
plenty o

approval of the postponement of the general meeting, and at the same time these shareholders nominated three of their number, Messrs. Arthur Eggington, C. Ridley Smith, and Hammersley Heenan, to act as a consultative committee with the directors. The directors will propose to the general meeting the confirmation of the appointment of this committee. The accounts show a balance of £2658, subject to the damages and cost of the litigation. These will have to be included in the accounts for the current year, and as soon as the appeal to the House of Lords is disposed of the directors propose to discuss and settle with the committee the best mode of dealing with the debit balance thus created. The committee agree with the directors in suggesting to the shareholders that it will be opposed to the interests of the company to enter upon this occasion into any discussion beyond the accounts submitted for approval.

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

ANGLO-MEXICAN.—The following is the mine output for the month of June:—“\$57,000 bullion; \$2500 concentrates; 1400 tons; 23 day's run.”

AROHA.—Cabled report from mine manager to the New Zealand Exploration Company, agents:—“Premier section. Vulcan level is in 175 feet to the north, and 112 feet to the south. Winze is down 104 feet. Premier upper tunnel is in 368 feet, Vulcan mid-level tunnel is in 98 feet.”—Colonist. A new adit has been started to unwater the Colonist and Premier sections. It will give 100 feet more backs in these two sections, and is now in 92 feet.”

BROKEN HILL PROPRIETARY COMPANY.—Copy of cable, dated Melbourne, 23rd inst.:—“Shares, £2 9s. 6d. buyers.”

BONANZA.—The following cablegram, dated July 24, has just been received from the head office, Johannesburg:—“Have started 20 stamps, further 20 about end of month September.”

BAYLEY REWARD CLAIM.—The following cable, dated 23rd instant, has been received by this company's London office from its head office at Melbourne:—“Pending amalgamation of claims deferred working rich chutes of ore. Bayley's No. 1 south new shaft. There are 5000 gallons of water in the 24 hours increasing.”

BASS AND FLINDERS.—The company's engineer at the mine sends the following cable, dated July 18:—“Bulk assays average 2 ounces 11 dwts. per ton of 2240 lbs. below the water level.”

BAYLEY'S REWARD.—The following cable, dated the 18th inst., has been received by this company's London office from its head office at Melbourne:—“Have struck seam of the richest we have yet found.—Cockshott shaft. Cannot estimate the quantity of ore.”

BLACK HORSE AND SANDSTONE GOLD REEFS.—Cablegram from Melbourne, dated July 20:—“Crushed 160 tons, obtained 84 ounces of gold, in addition to estimate; value of concentrates, more than 30 ounces; left on the copper plates, more than 20 ounces; concentrates to be sent to the smelting works. We recommend putting up 20 more stamps at once instead of 10, estimated to cost about £2500. Defeat sinking, it will take several years' work present levels.” The secretary states that the crushing above referred to forms part of about 1500 tons at grass considered to be inferior grade to considerable bodies of stone now available in the mine. The result of this crushing (over 16 dwts. per ton) considerably exceeds the expectations of the directors, and must be considered very satisfactory, particularly in view of the belief that 4 dwts. of gold per ton will cover all expenses at the mine.

BRITISH BROKEN HILL PROPRIETARY.—Returns for the month ending July 15, as cabled from Adelaide, July 18:—“Crude ore jigged, 4600 tons; concentrates produced, 1400 tons, containing 950 tons lead and 11,300 ounces silver, also a large quantity of slimes, second quality concentrates. Returns considered satisfactory, almost daily improving. As soon as the erection of bouldles completed, there will be a considerable improvement.”

BROKEN HILL.—Copy of cable dated Melbourne July 21, received same date, 10 a.m.:—“Shares £2 9s. buyers.”

CARRINGTON.—The following cablegram has been received from the manager, Mr. Alan B. Bright, at Charters Towers:—“We have struck pieces of quartz very rich in free gold in the Caledonia. Prospects are encouraging. I will arrange as soon as possible for a survey of the Victoria lode on the northern boundary.”

CARLYLE GOLD MINES (Parker's Range, West Australia).—The secretary has received information by cable from Hon. M. Hume Black that the new machinery is working well and crushing satisfactorily, and it is expected that the manager will clean up at the end of the month, when a further cable may be looked for advising the result of the run.

CHAMPION REEF (India).—The following cablegram is from the mine, dated July 17:—“Oil mill stopped for repairs on July 5; will start again on July 23. New mill working splendidly. Cholera abated.”

CHAMPION REEF (Nannine, W. A.).—Captain Osborne cables under date Nannine, 20th inst., that the quality of the stone in the north outcrop continues persistently valuable, also that the south drift from the level in D shaft has been driven 90 feet in massive quartz, superior quality. In H shaft at 50 feet a great and valuable lode has been struck; width not yet determined.

CONSOLIDATED MURCHISON.—Cable information has been received from the mine that the new cyanide plant is in full operation and working most successfully; the time of treatment has been considerably reduced. The plant has been in every way most successful, and will largely add to the revenues of the company.

CROWN UNITED.—The directors have received the following cablegram from their consulting engineers:—“Coolgardie, July 20. Shall commence crushing next week. Developments of mine fully justify expectations.”

CLYDE.—The following cable has been received from the manager at Coolgardie:—“Have started hoisting engine; a great success. Expect to start milling on or about the last week in August. Pushing the matter forward with all possible speed.”

DARIEN.—The directors of the Darien Gold Mining Company (Limited) have received the following cablegram from their manager at the mine:—“Crushed 493 tons, obtained 840 ounces of gold.”

DIXIE.—The London office has received the following cable from the Chairman, dated July 20:—“Work is being pushed on with energy. Development shows great improvement in indications.”

EJUDINA.—The following cable, dated July 20, has been received from Messrs. Gibbs, Bright, and Co., the company's agents in Melbourne:—“Hope to commence crushing fortnight, plenty of water for our purpose.”

EAST RAND GOLD, COAL, AND ESTATE.—A cablegram has been received from Johannesburg as follows:—“Coal very good; every hope that in complete working order September.”

GOLDEN CEMENT CLAIMS.—Cable received from company's agent at Perth, dated July 22:—“Very rich samples M'Auliffe's reefs have been forwarded. Marked improvement in mine.”

GREAT BOULDER MAIN REEF.—The following cable, dated July 23, has been received from the company's agent at Perth:—“Winze in 70 feet level is now down 52 feet; crosscut to the west 10 feet, have cut lode again, at 4 feet in width. The lode is well defined, going down nearly vertical. Most important development; leaves no doubt at all (that) lode maintains its width and value in diorite. The mine looks splendid; never better. Fifteen hundred tons at grass will average at least 4 ounces.”

GREAT EASTERN COLLIERIES.—Cable dated July 23:—“Profit for June £2200. The number of tons obtained 16,600.”

GULLEWA.—Extract from cable received from the company's agents, Messrs. F. W. Prall and Co., Melbourne:—“The manager reports: There are two main shafts on this mine, 30 feet, 100 feet. Four winzes, 45 feet, 50 feet, 60 feet, 90 feet. Drive crosscuts amounting to 300 feet. The reefs on the property amount in number to five, proved four. Number of tons of ore on the dump is 300. Estimate the amount of ore in sight at 4000 tons. Reefs looking well, mines are looking well. We are now crushing ore. Plat's looking first rate. Are now sinking to enable us to get sufficient water available to run all the machinery.”

GOLD ORE TREATMENT.—The company have received the following cablegram from the representative, Mr. H. Livingstone Sulman, who is superintending at the mines at Day Dawn, Western Australia, the starting and working of a large plant erected for the working of this company's bromo-cyanogen process:—“Trial highly successful, both processes (solvent and precipitation), amount of ore treated, 75 tons; solvent strength potassium cyanide, 1-10th per cent.; cyanogen bromide, 1-20th per cent.; residues assaying only 10 grains per ton, original ore 4 dwts. per ton, percentage of extraction equals 90 per cent.; consumption of bromo-cyanogen, 4 ounces, and potassium cyanide 5 ounces per ton of ore; time of treatment, 20 hours; precipitation by zinc fume very successful entirely new continuous plant; assay of original liquor 10 dwts. per ton containing 1-16th per cent. potassium cyanide; assay of treated liquor 7 grains per ton; cost of precipitation per ton of ore 4d. Can reduce this. Attention is, therefore, drawn to the complete extraction and the remarkable small quantity of the re-agent used, and the perfect recovery of the gold from the solutions.”

GOLDEN DOVE.—According to a telegram received from the mine manager, crushing should have commenced two or three weeks ago, and the directors are anticipating the result of the first clean-up, which they have every reason to believe will be very satisfactory.

HAURAKI (New Zealand) ASSOCIATED GOLD REEFS.—The following cable has been received by the local committee at Auckland:—“Have secured valuable mill site (and) water power. The improvement in the mine is most marked as the breadth of the level is advanced. General indications are most promising.”

HANNAN'S LODE.—The following cablegram has been received from Messrs. C. J. McCulloch and Co., the company's mine managers at Kalgoorlie, dated July 20:—“No. 1 shaft, 25 feet; No. 2, 17 feet; No. 3, 6 feet. Now being timbered. Can put out gold.—Connolly.”

HANNAN'S BROWNHILL GOLD.—Third clear up, 119 tons of 2000 pounds yielded 274 ounces gold—equal to over 2½ ounces per ordinary ton. Rich slimes untreated. The company are now sending out appliances for treating the slimes, now being successfully used in Germany, and by which the whole of the gold is extracted very cheaply and expeditiously.

HAURAKI GOLD.—The directors yesterday received the following telegram from the manager, viz.:—“Total amount crushed (four weeks) 370 tons; ounces of gold, 2165; approximate cost, £1650; profit, £5000. Main shaft is down 291 feet.”

ISLE OF MAN.—The secretary has sold 100 tons of Foxdale lead ore at £8 5s. 6d. per ton.

KAPANGA GOLD.—The directors have received the following telegram from the manager, viz.:—“Shaft has been sunk 21 feet for the month. No change in the mine. Have crushed 100 tons, ounces of gold 85.”

KATHLEEN GOLD.—The directors have received the following telegram from the manager, viz.:—“Main shaft is down 143 feet, water increasing. There are strong indications of nearing reef.”

KABOONGA.—Cable:—“North-west drive 892 feet. Two additional bores successful. Pushing this work to every extent possible.”

LADY LOCH GOLD.—The directors on July 13 telegraphed to Mr. McCracken, the manager of the mine, as follows:—“Cable number of tons crushed—what is likely to be the result? Reply by cable immediately.” They have received the following reply:—“Total amount crushed 385 tons, it will probably result in 3 ounces 10 dwts.” The directors are surprised at the small number of tons crushed, and they have cabled again for further information, which when received will be at once communicated to the shareholders.

LADY MARGARET GOLD.—Cable dated July 17 from Mr. George Park, manager, Goongaree:—“South-west shaft 60 feet. Have cut reef in crosscut carrying visible gold 12 feet into the lode. The lode looks exceedingly promising.”

LOCHINVAR.—Transition of cable received from the company's representative in Coolgardie:—“Mine promises exceedingly well for the future. The present depth of the shaft is 180 feet. The width of the lode is 3 feet; 400 gallons of water per 24 hours. Shall start driving north and south after sinking further 150 feet immediately. Waratah is a parallel lode to very good stone. Shall commence cesteining at once on the western boundary.”

MAORI.—The following cablegram has been received by the company:—“The machinery is working very smoothly. Commence crushing Monday.” This probably refers to last Monday.

MAY CONSOLIDATED.—The following cable message, dated Johannesburg, 16th inst., has been received:—“The profit for the past month (June) was £4376.”

MURCHISON NEW CHUM.—The following is copy of cable received from the mine:—“Bottom level in the north end have discovered vein. The vein is spotted with ore. The vein though thin is between well defined walls 4 inches. I regard present outlook as decidedly encouraging.”

MENZIES MINING AND EXPLORATION.—Cable from manager at Menzies:—“Lady Shenton east. Depth of shaft 83 feet; winding engine and boiler have been erected.—Lady Shenton extended. Am enlarging and timbering main shaft. Crushing machinery is now being erected.—Leondas. Have struck lode at 140 feet level.—Isabel. Underlie shaft now down 146 feet, vein 1 foot 3 inches, improving. New underlie shaft 71 feet, vein 9 inches, 26 ounces. No. 3 shaft 84 feet, vein 9 inches, 3 ounces 6 dwts.”

MENZIES PIONEERS.—The manager cables as follows:—“July 16:—“1404 main shaft 149 feet deep.—North-west shaft. The eastern crosscut at the 39 feet level 55 feet from [the

shaft. The drive north of the lode is now in 12 feet. The formation is 4 feet 6 inches, contains quartz 1 foot. The quartz will average about 32 dwts. (1 ounce 12 dwts.) per ton of 2240 lbs. The lode at 91 feet driving from same crosscut on this lode shows quartz, yielding 53 dwts. (2 ounces 13 dwts.) per ton of 2240 lbs.—North shaft. Total length of the south drift on the 41 feet level is 33 feet. The vein is 6½ inches, yielding 120 dwts. (6 ounces) per ton of 2240 lbs.”

McKENZIE GOLD.—Cablegram received from the company's mine manager:—“Glenloth. Cablegram from the mine manager states the second crushing of 104 tons yielded 176 ounces of gold, the tailings assaying 15 dwts., making the return 2 ounces 9 dwts. to the ton, an improvement of 6 dwts. per ton on the previous crushing.”

MYSORA.—This company has received the following telegram from their superintendent, viz.:—“Struck lode (Crocker's shoot) crosscut to the east 1430 north of sump winz', Rows's shoot; results of assays will follow.”

NEW CHUM.—Mr. L. A. Samuels, the company's manager, sends the subjoined cable information:—“New Chum (Bendigo). The eastern crosscut at No. 7 level (610 feet) has cut the lode. Will put up rise and connect with level above.”

NEW COOLGARDIE EXPLORATION AND FINANCE ASSOCIATION.—Cable from Mr. Angel, colonial director, in reference to two exploration parties the company equipped and sent out:—“July 16, both parties went yesterday.”

SIURO PRETO.—This company has received a cablegram, giving the June returns as follows:—“Passagem Mine, 3313 tons produced 1495 ounces.—Raposo Mine, 330 tons produced 51 ounces.”

NEW QUEEN.—The London office has received the following cablegram, dated Charters Towers, July 18, giving result of crushing for past fortnight:—“245 tons yielding 97 ounces gold. Have drawn on you for £235. Have shipped per s.s. Merkara 156 ounces gold. We think returns likely to improve for the next fortnight.”

NEW GUADALCAZAR QUICKSILVER.—The following cable was received on Monday from the mines:—“The production of quicksilver for the four week ending July 17 is 11,129 lbs equal 1483 flasks; mine shows a slight improvement.”

NEW ZEALAND CROWN.—The New Zealand Exploration Company, as agents, have received following cable from Mr. Daw, mine manager:—“In the period extending from July 1 to July 15, the No. 4 tunnel has been extended 10 feet, thickness of reef 8 feet, average assay value £2 15s. The No. 6 tunnel has been extended 13 feet, width of the reef 6 feet, average assay value £3 17s. 9d. The winze from No. 6 level has been sunk 5 feet, width of reef 5 feet, assay value £4 10s. Stopped out 34 fathoms during the fortnight; 219 tons mined, the average assay value of which is £3 12s. 6d. In the Earl of Glasgow section the tunnel has been extended 41½ feet in the fortnight.”

OCTAGON EXPLORERS (Limited).—The following cable has been received regarding the property at Hannan's (Kalgoorlie), lately acquired by this company jointly with the Gold Estates of Australia (Limited), viz.:—“Union Jack. Have struck ore at crosscut on the 115 feet level, which assays 16 dwts. per ton. The width of the lode is 3 feet 6 inches. The lode is well defined. The lode looks exceedingly promising.”

QUEEN CROSS REEF.—The London agency have received the following cablegram, dated Charters Towers, July 20:—“Have cleaned up after crushing 345 tons of quartz, gross yield 958 ounces of gold. This is a partial clean up only.”

ROME CONSOLIDATED GOLD MINES.—The following telegram has been received from the mine manager at Coolgardie:—“Have had samples assayed with following results:—No. 1 assay of ore from 130 feet level, 4 ounces of gold per ton. No. 2 new shaft from 50 feet level, 3 ounces 5 dwts. of gold per ton. Recommend sinking the vertical shaft in order to further develop reef.”

ROYAL SOVEREIGN.—A cablegram states:—“The manager reports main shaft down 177 feet; 200 tons will average 30 ounces per ton. The bottom of shaft looks well, and the mine generally is opening up splendidly.”

ROSE HILL UNITED.—Cable from the mines:—“Formation struck 70 feet (Lease 226) Saturday, in width now 13 feet, 3 ounces 5 dwts. per ton fine gold.”

ROBINSON DEEP.—Copy cable received from the head office, July 22:—“Have struck reef at a depth of 1806 feet in broken ground. Reef has an average assay value of 3 ounces per ton; over 12 inches. Will continue sinking to cut main reef leader.”

SHERLAWS.—Under date of June 17 Mr. Sherlaw reports:—“The underlay shaft is now over 200 feet in depth. The reef is much larger than it has been hitherto, and carrying good gold, in quality excelling that of the No. 1 level, from which we had the crushing, which averaged about 3 ounces.” Cable received July 14:—“Battery working well.”

SIMMER AND JACK PROPRIETARY.—The profit for the month of June was £10,216.

ST. JOHN DEL REY.—The following telegram has been received from Mr. Chalmers:—“Produce 11 days, first division July, 9750 oits., equal to 1124 ounces troy; value £3778. Yield per ton 48 oits. (55 ounces troy).”

TAITAPU GOLD ESTATES.—Copy of cable from Mr. W. A. Low, dated July 15:—“Since last report in order to satisfy miners wages has been raised 2s. weekly. Have received telegram from Coutts to-day as follows:—‘Breaking out rich ore last few days. Hursthouse and Fell much pleased with prospects in mine. In consequence of new developments the number of men employed has been doubled.’”

TARARU CREEK GOLD.—The directors yesterday received the following telegram from the manager, viz.:—“The workings show considerable improvement. In the lowest level, Dunedin section, the ore is improving as we advance, and shows free gold. The width of the reef is 4 feet.”

VAN RYN GOLD MINE3 ESTATE.—The following is copy of cable received from Johannesburg:—“Battery last month has resulted in a loss £933 10s. Cyanide process a profit of £407. Owing to the condition of the mill, do not see any prospect of improvement; doing the best we can. Mill engine arrived.”

VICTORIA AND QUEEN.—The London agency have received the following cablegram, dated Charters Towers, July 23:—“Have cleared up after crushing 240 tons of quartz; gross yield, 574 ounces gold. This is a partial clean-up only.”

VICTORIA GOLD MINING ASSOCIATION (Charters Towers).—The following cablegram has been received at the London office:—“295 tons crushed yielded 531 ounces gold.”

194 feet level. Reef 3 feet wide. Development quite satisfactory."

WAIHI CONSOLIDATED.—The following telegram has been received from our manager in New Zealand:—"Ore that will assay £4 16s. 6d. per ton picked up on surface Brilliant section; we intend to prospect thoroughly."

WAIHI GRAND JUNCTION.—The manager cables, July 24:—"Grand Junction engine shaft is down 393 feet. Waihi West prospecting shaft crosscut is driven 408 feet north, 158 feet south."

REPORTS FROM THE MINES.

B R I T I S H M I N E S .

DEVON GREAT CONSOLS.—William Cleme, July 23: In consequence of the dry weather and the small quantity of water in the Tamar, two of our largest pumping wheels are idle, and at Watson's the workings are under water up to the 118 fathom level, and the stopes are stopped. At Wheal Anna Maria and Wheal Josiah, with the aid of the steam engine, all the points of operation are kept going. Wheal Emma is also in full work, the water here being drained by a steam engine. At the arsenic works we have only sufficient water for the working of Brunton's calciner, and the large tube is thrown out of work. We have increased the number of men on the hand furnace, and hope soon to place on some more. During the whole period of the working of the Devon Great Consols Mines the River Tamar has never been so low. We are, however, anxiously hoping for a change, and some showers have fallen, which have caused a rise in the river to some little extent.

LEADHILLS.—The following report has been received: I have nothing new to report from underground to-day. The several forebears of the different levels driving look much the same as when last reported on, and the stopes (above water) are yielding about their usual quantities of lead ore. Owing to the dam giving away at the 102 the water has risen to the 130 fathom level. We hope to complete the new dam to-morrow, and afterwards gradually drain the water from the mine. We have had a little rain during the past week, but not sufficient to increase our supply of water for pumping, &c. Surface works going on regularly.—W. H. Paul, July 20.

POLBERGER.—Report dated July 15: Since I last reported, the sinking of the shaft has been proceeded with by the rock drills, and some rich branches have been intersected. The 50 feet east has been driven by 8 men, but there is no change in the character of the lode. In driving the 15 crosscut north a small lode was driven through, just beyond the rich run of branches referred to in previous reports. During the past few days I put some men to open out upon it, and am pleased to say that it has proved to be a well-defined flat lode, 3 feet wide, and producing rich stones of tin. This is an important discovery, as it has the same underlie and appearance as the Champion lodes of the district. I shall continue driving on it with all speed, and anxiously wait the result.—(Signed) John Harper.

WEST KITTY.—John Williams and Joel Hooper, July 23: The rise in back of 34 fathom level west of Reynolds' shaft is worth £9 per fathom. The 72 fathom level west of Reynolds' shaft north of slide. The lode is worth £7 per fathom. The rise in back of this level is worth £8 per fathom. The 60 fathom level driving east of Thomas's shaft is worth £9 per fathom. The 60 fathom level driving west of Thomas's shaft is worth £7 per fathom. The shaftmen are making fair progress in sinking Thomas's shaft.

MISCELLANEOUS.

ARROW PROPRIETARY.—Mine manager's fortnightly report ending June 17: Timbering of 100 feet level leading from Brookman's to main shaft completed. Crosscut east of Brookman's shaft advanced 34 feet and intersected a lode, and driven into it 4 feet, producing low grade stuff for gold.—Barrow's shaft. Crosscut west extended 14 feet, leaving 33 feet to communicate with Brookman's shaft.

ASSOCIATED GOLD MINES OF WESTERN AUSTRALIA.—Mine manager's report for fortnight ending June 3:—Adelaide (Block 103 E). Shaft No. 1 sunk to total 125 feet. Crosscut west started and driven 6 feet. This should pass through lode material, and will prove the western portion of the block. Shaft sunk several feet through slate, but crosscut shows lode material.—Shaft No. 4, 135 feet level. Driving north and south on course of lode. North driven to total 17 feet. South driven to total 30 feet. Have timbered portion of shaft with five sets and lathed same. Have cleaned up well, squared shaft, and sunk 1½ feet, total 11 feet 6 inches.—Australia East (Block 72 E). Shaft No. 2. Crosscut extended to total 54 feet 6 inches. Shaft No. 6 sunk to total 89 feet, and 11 feet timbering put in.—Lake View Extended (Block 101 E).—Shaft No. 3 104 feet level. Crosscuts east and west continued. East extended to total 133 feet, now in schist and ironstone. West extended to total 81 feet 6 inches, passing through lode material which shows gold by panning.—Shaft No. 4 100 feet level. Crosscut west extended to total 88 feet 6 inches. The face of this drive is similar to crosscut in No. 3, and there is now 70 feet to connect the drive. South on lode extended to total 29 feet.—Shaft No. 5 52 feet level. Drive on crosscourse reef extended to total 180 feet. The reef still keeping course towards No. 4, and present width 1½ feet.—Australia (block 38). North drive extended to total 12 feet 6 inches. Stone in both drives carrying gold, averaging 2 ounces per ton.—(Signed) William Oats, manager.

ASSOCIATED SOUTHERN (W.A.).—Mine manager's report for three weeks ending June 13:—Crescent. Lease 1357. No. 1 shaft. Crosscut east driven to total 136 feet. Country passed through consists of decomposed porphyry with numerous bands of ironstone, white quartz, and kaolinised clay. At 40 feet 6 inches from shaft we struck a quartz reef 18 inches to 3 feet wide, showing gold. While crosscutting we met loose boulders of grey quartz shed from a reef or lode not far distant. Crosscut west driven to total 81 feet, passing through similar class of country as met with in eastern crosscut at 110 feet level.—Crescent North. Lease 1413. No. 1 shaft sunk to a total 35 feet, near south-west corner peg on western brow of an ironstone hill. I purpose sinking 100 feet crosscut west, and prove country not proved by eastern crosscut from No. 1 shaft on Lease 1357, also crosscut south to intersect east and west reef which runs through width of lease.—Crescent Extended Lease 1412. No. 3 shaft sunk to a total 150 feet on an ironstone rise, with intention of continuing to 100 feet or deeper, and then crosscut and pick up reefs or lodes traversing the lease.—(Signed) H. Ley Hancock, mine manager.

BROKEN HILL PROPRIETARY.—Report for the four weeks ending July 23: 32,373 tons treated, and output from the refinery 449 ounces of gold, 475,507 ounces of silver, 1325 tons lead, 25 tons antimonial lead, and 148 tons matte, containing 39 tons copper, and 23,822 ounces silver.

BREMNES GOLD.—The following report has been received from the mine, dated Hagaesund, July 17:—Rivg. In the 500 feet level we have struck a quartz lode, carrying galena, and showing gold freely. Have started six men on this level in eight-hour shifts to push matters. In the level above the lode is 4 feet wide, of which 2 feet is good quality quartz, well mineralised, and showing gold. The lode in the 200 feet south end continues to improve. The quartz is 3 feet in width, and contains galena and copper pyrites. The men have started to drive the 150 feet south level. The quartz has an aggregate width of 2 feet, contains galena, and several stones have shown gold.—Fjordnes. The lode in bottom winze has somewhat fallen off as to width and quality of quartz. The quartz in north level is 3 feet wide, and to-day we have again met with coarse gold.

BROWN HILL EXTENDED.—Mr. E. G. Fries, the business manager, writes under date June 17, as follows:—Machiney. The largest portion of the winding plant has arrived in Coolgardie, and I have let a contract for carting same to the mine at the rate of £1 16s. 6d. per ton and £4 15s. 6d. per ton for the boiler. This, I think, is the cheapest price that any machinery has been casted from Coolgardie to Hannan's, and think we are unusually fortunate.

CHALLENGE GOLD ESTATES.—The company are in receipt from their mine manager, writing under date June 17, of the following:—Shamrock. An east and west reef traverses right through this claim, having a large outcrop showing visible gold. A prospecting pit was sunk on the reef to a depth of 8½ feet. In the bottom the reef is 3 feet wide, and gives a good prospect in the dish. A new vertical shaft 7 feet by 4 feet was commenced in February last, and on May 29 at a depth of 108 feet it struck the reef, which shows 4 feet 2 inches of quartz and no footwall. Sinking is being continued. There is an outcrop of another east and west reef, which has proved auriferous in both adjoining blocks. This reef also underlies south, and therefore dips through the entire width of the block.—Thistle. There is one east and west reef traversing this block, which is a continuation of the northern reef on the Shamrock claim. The outcrop in places shows visible gold, and the reef is large and well defined. A small prospecting or trial shaft was sunk vertically, and intersected the reef at 55 feet, the lode standing at this point is 2 feet 6 inches wide, and assays 17 dwts. 10 grains of gold per ton. A new vertical shaft 7 feet by 4 feet has been sunk, which intersected a lode last week at a depth of 110 feet. The lode at the point of intersection was only 3 feet 3 inches wide; since then, however, it has been cut out to 3 feet wide. Judging from the inclination of the reef in the old shaft I am disposed to think this is not the main reef; sinking will, therefore, be continued. The ore from these two blocks assays from a trace up to 3 ounces per ton.—Lilac. The reef which runs east and west through this claim outcrops its entire length, and shows coarse gold at surface. A vertical shaft 5 feet by 3 feet has been sunk to a depth of 54 feet. At this point it struck the reef, but on exemption being granted sinking was suspended before the size of the lode was ascertained. A sample from the part of the reef broken gave by assay 2 ounces 1 dwt. 16 grains of gold per ton. There are outcrops of another east and west reef, and also a cross reef (north and south) on which, as yet, no work has been done.—Lady Betty. On this claim one trial shaft only has been sunk. It was commenced vertically, and at a depth of 44 feet it struck the reef. It was subsequently continued on the line of the reef to a depth of 84 feet. The lode in the bottom is 2 feet wide, and assays 2 ounces, 6 dwts. 16 grains of gold per ton. The reef runs east and west through the block and the outcrops show visible gold. A costean trench was cut across the reef 390 feet east of the shaft, and the reef, though small at this point, shows good free gold.—Iolanthe. An east and west reef runs through this block, which at the western end just outside the boundary is cut off by a dyke. A prospecting shaft was sunk on the reef to a depth of 80 feet, in the bottom of which the lode is 2 feet 5 inches wide, assaying 1 ounce 10 dwts. 12 grains per ton.

CLUTHA (Barberian, Transeval).—The mine manager reports for the week ending June 24 as follows:—700 feet level. This level is looking very well, and face of drive is all good reef. I do not know the width of reef as I am leaving good rock in footwall, which pans well. There is heavy visible gold, and some of the pieces of gold in my pannings are too large to estimate what they would go. Therefore, as I do not reckon these pieces in my pannings, you will see that I am not overestimating. The pannings during the week vary from 2 dwts. to 2 ounces.

CHAFFERS.—The following report dated June 15 has been received from F. Bowes Scott, the company's mine manager at Coolgardie:—After careful con-

sideration we have concluded to continue sinking the shaft on the eastern boundary in the hope that we may get some portion of the lode now within the main reef property adjoining our side line. In the northern drive from this shaft we have met with another leader, from which we have had at times excellent prospects. As, however, we are approaching the Horseshoe boundary in that direction it seems inadvisable to continue the drive, and we shall, therefore, take the men off at that point and shift them to the above-named shaft.

DUNDERBERG GOLD.—Manager's report for fortnight ending July 4: Mine. The winze has been sunk 13 feet since my last, total depth below the tunnel 24 feet. The ledge in the bottom is 6 feet wide, all good pay ore, assaying from 2 ounces in gold and 66 ounces in silver, to 14 dwts. gold to 12 ounces silver. The footwall is smooth, hard, and well defined, while hanging side of the winze is still in low grade ore, the pay ore laying on the footwall 6 feet in width. We are now engaged in putting in the boiler and hoist, and will commence sinking again as soon as the pump is set up, the water being too much to handle with a hand pump. The upraise, 150 feet south of the turntable, shows the best value and largest ore body in the mine. It is 10 feet wide, and assays from 97.43 to \$13.05. The average of eight assays shows \$28.45 per ton—55 per cent, of gold, 45 per cent, silver of the value calculated at 65c per ounce—present market value. The south drift has been advanced 10 feet since my last, total 254 feet from turntable. There is quite an improvement in the end, the ledge is 13 feet wide, assaying \$14 gold, no silver. I am pleased to be able to report that there is a very substantial improvement both above and below the tunnel level.—Mill. Owing to the most satisfactory developments in the south drifts and in the winze I have decided to erect the 20 stamps at once, consequently I am enlarging the grade to take the 20 stamps.

EMERALD REWARD.—The manager reports as follows, Yalgoo, June 1: Point No. 1. Well shaft (shaft No. 1). I have had two men at this point all week sinking a small shaft about 20 feet east of the Well shaft to enable me to get on to some small leaders situated at the back of part of the stopes in the Well shaft. I intersected the leaders yesterday and will put on two additional men so that I may have the ground stopped and got for the battery. The same as far as I am pleased to say is of fairly average quality.

Point No. 2. Shaft No. 1c. I have still two men working here, both stoping, one in each end east and west. The quartz here still keeps much about the same. It is my intention to erect a whip pole at this shaft next week, in order that I may be able to keep the water down and thus be able to see what there is, to a certain extent, below water level. As far as I can judge at present, the stone appears of fairly good value, and seems to contain no so in depth. Surface. Two men have been engaged on the surface, and should have it all cleaned up to-morrow. Shamrock, shaft No. 1. The two men I put on here last week are still busy stoping, and have now raised about 4 tons. The quartz looks to be fair average stuff, and should, I think, pay expenses. The men have had to remove the bellows and anvil from the El Dorado lode, to where they are now working. This was done to save the time and trouble of always running up to the El Dorado to sharpen their tools. The lode in the stopes in this shaft will average about 4 inches.—Battery. This I have kept running full time on the surface stuff. I expect to finish this to-morrow. The quantity put through will be about 100 tons, and according to the look of the plates, &c., should turn out fairly well. I anticipate being able, after overhauling the battery, &c., to mill stone from the Well shaft on Monday or Tuesday.—General. I am now having a tramline laid from the battery up to shaft No. 1c for the purpose of delivering the quartz right into the battery, so as to save the expense of hiring a horse and dray for that purpose.—June 15. The clean up of 112 tons surface stuff resulted in a return of 59 ounces retorted gold, equal to about 11 dwts. per ton.

HANNAN'S LODE.—The following report has been received from Messrs. C. J. McCulloch and Co., the company's mine managers at Kalgoorlie, dated June 15:—Lease 1362. The shaft has been sunk to a depth of 66 feet. At 60 feet crosscuts have been put in east and west of the shaft for a distance of 50 feet and 55 feet respectively. The western crosscut passed through a lode 14 feet wide composed of ironstone and porphyry, the lode giving very encouraging prospects.—Lease No. 1363. Shaft 66 feet deep. Now crosscutting east to prove ground on which some very good alluvial was found. Mr. Connolly suggests that the principal development work be confined to lease No. 1362, but is also anxious to continue operations on lease No. 1363, as he is very sanguine of satisfactory results.

HERBERT MINE.—Extract from the West Australian Gold Fields Courier: Another mine which is likely to restore the reputation of Coolgardie to its proper place in the estimation of the world as a gold producing district is the Herbert Mine, situated about 3 miles north of the town. There is a very promising belt of country in the neighbourhood, and already it boasts of the United Britons, and several other good shows, but the Herbert, so far as opened out, is likely to prove the pick of the lot. Two parallel reefs have been proven on the property, and both are highly auriferous. The eastern reef is a generous looking quartz of a brownish tint, with black iron fissures. Gold can be seen in almost every piece broken; and, in many instances, specimen stone is met with. The prospectors had put down an underlay shaft 70 feet on this reef, and a few yards north another lode was sunk 30 feet, the lode being fully proved in both cases. It was further traced right along to the northern boundary by means of costeans and shafts, a fine solid body of stone being uncovered in every instance. A short distance from the boundary a shaft down 30 feet shows the reef to be 1 foot wide, and already, from a kind of burrowing workings adjacent, quite 150 tons of rich ore has been taken out. A trial crushing of 13 tons carted out of the dump has just been put through, and given the satisfactory yield of 50 ounces of gold, or an average of 3½ ounces to the ton, and assays have shown that over an ounce per ton has gone into the tailings. It is certain that the whole dump of 150 tons is worth over 4 ounces to the ton. The western parallel reef has not been so well developed, but costeans have been cut out to depths varying down to 6 feet, and it, too, is a firm solid body of stone. It is a white, sugary quartz, but carries plenty of visible gold. Here the precious metal is chiefly distributed in little coarse grains, although there is a proportion of fine gold. This stone has not been assayed in bulk, but it looks a good 2 ounces to 3 ounces quartz. The Herbert is an English company of £25,000 in 75,000 £1 shares, of which 5000 are held in reserve, and there is a working capital of £20,000, a sensible capitalisation. Mr. W. G. Churchward is the managing director in Coolgardie, and as he bought the property, he is to be congratulated upon the very excellent developments which have justified his confidence in the lease. Mr. Newington, one of the members of the London Board, has been in Coolgardie for some weeks past, and from his frequent inspections of the mine he is satisfied that his company has a genuine property, out of which dividends will be won. The main shaft, beautifully timbered, has been sunk to a depth of 150 feet between the two reefs. A chamber has been formed at this level, from which both lodes will be crosscut. Specifications have been sent to England for machinery, and in the meantime Mr. Churchward will push on the development work, especially in exploring for water. Before this year is out the Herbert ought to be turning out its fortnightly cake of gold.

HERBERT MINE.—Extract from the West Australian Gold Fields Courier: Another mine which is likely to restore the reputation of Coolgardie to its proper place in the estimation of the world as a gold producing district is the Herbert Mine, situated about 3 miles north of the town. There is a very promising belt of country in the neighbourhood, and already it boasts of the United Britons, and several other good shows, but the Herbert, so far as opened out, is likely to prove the pick of the lot. Two parallel reefs have been proven on the property, and both are highly auriferous. The eastern reef is a generous looking quartz of a brownish tint, with black iron fissures. Gold can be seen in almost every piece broken; and, in many instances, specimen stone is met with. The prospectors had put down an underlay shaft 70 feet on this reef, and a few yards north another lode was sunk 30 feet, the lode being fully proved in both cases. It was further traced right along to the northern boundary by means of costeans and shafts, a fine solid body of stone being uncovered in every instance. A short distance from the boundary a shaft down 30 feet shows the reef to be 1 foot wide, and already, from a kind of burrowing workings adjacent, quite 150 tons of rich ore has been taken out. A trial crushing of 13 tons carted out of the dump has just been put through, and given the satisfactory yield of 50 ounces of gold, or an average of 3½ ounces to the ton, and assays have shown that over an ounce per ton has gone into the tailings. It is certain that the whole dump of 150 tons is worth over 4 ounces to the ton. The western parallel reef has not been so well developed, but costeans have been cut out to depths varying down to 6 feet, and it, too, is a firm solid body of stone. It is a white, sugary quartz, but carries plenty of visible gold. Here the precious metal is chiefly distributed in little coarse grains, although there is a proportion of fine gold. This stone has not been assayed in bulk, but it looks a good 2 ounces to 3 ounces quartz. The Herbert is an English company of £25,000 in 75,000 £1 shares, of which 5000 are held in reserve, and there is a working capital of £20,000, a sensible capitalisation. Mr. W. G. Churchward is the managing director in Coolgardie, and as he bought the property, he is to be congratulated upon the very excellent developments which have justified his confidence in the lease. Mr. Newington, one of the members of the London Board, has been in Coolgardie for some weeks past, and from his frequent inspections of the mine he is satisfied that his company has a genuine property, out of which dividends will be won. The main shaft, beautifully timbered, has been sunk to a depth of 150 feet between the two reefs. A chamber has been formed at this level, from which both lodes will be crosscut. Specifications have been sent to England for machinery, and in the meantime Mr. Churchward will push on the development work, especially in exploring for water. Before this year is out the Herbert ought to be turning out its fortnightly cake of gold.

LONDON AND WESTERN AUSTRALIAN EXPLORATION.—The mail to this week contain very favourable reports on the company's Golden Towers leases at Woodley's Find. The mine manager writes that the shaft on block No. 2 is going through a splendid dyke formation, interspersed with jaspars and calcedonites, quartz leaders, which should make into a strong lode at depth. We have also picked up a nice parallel leader to main lode about 20 feet east on south end of this block; also a likely looking reef intersecting main lode on west side. On block No. 4 the reef has given way to formation heavily mineralised, and carrying well defined walls. The company's engineer has returned from his tour in the East Murchison district, and speaks in high terms of the company's British King lease at Darlot, which he considers one of the best properties he visited. Numerous properties are under offer to the company at Pendenn, Mount Margaret, and Yerilla, and the fine on block 43 Hampton Plains Estate is reported to be looking very well, the quality and width of the stone being fully maintained.

LYDENBURG ESTATES.—The company's prospector's advice is as follows:—Kindergarten. Have found well defined outcrop of what I take to be two or three distinct reefs. I took 12 samples, and they have gone forward to Pilgrim's Rest to await my arrival, when I will test them.—Moofontain. Shaft No. 1 down 27 feet, reef in bottom fully 2 feet thick. Have driven some 14 feet along the reef. Shaft No. 2 down 39 feet. We are now going through a thick layer of slate. Shaft No. 3 down 23 feet. Is nearly 1 mile away from No. 2.

LAKE VIEW SOUTH (West Australia).—Mine manager's report for fortnight ending June 3: Main shaft sunk to total 139 feet, 12 feet of timbering put in. A vertical wall of slate has been met in shaft with quartz leader 12 inches in thickness as rying gold. 100 feet level is still maintaining its usual size and showing good gold. Battery is being pushed on as fast as possible.—(Signed) Wm. Oats, manager.

LOMA GOLD.—The mine superintendent, writing under date June 21, ultimo, when I started cleaning down, and on the 22nd ultimo cleaned up 7½ ounces of gold valued at \$1332 (gold). This I consider a very poor return but I was unable to pass the pipe and machine across to the face of the Soto Mine and start washing into the new sluices, and that we were quite sure the gravel was good in this point. Up to my time of writing we have not started washing at this front, but we shall do so after this run, as I have now got the pipe fixed lower down. We have been very fortunate with the ditch lately, and I hope shortly to clean up again. I trust the directors will not be disappointed with the results. The reef which runs east and west through this claim outcrops its entire length, and shows coarse gold at surface. A vertical shaft 5 feet by 3 feet has been sunk to a depth of 54 feet. At this point it struck the reef, but on exemption being granted sinking was suspended before the size of the lode was ascertained. A sample from the part of the reef broken gave by assay 2 ounces 1 dwt. 16 grains of gold per ton. There are outcrops of another east and west reef, and also a cross reef (north and south) on which, as yet, no work has been done.—Lady Betty. On this claim one trial shaft only has been sunk. It was commenced vertically, and at a depth of 44 feet it struck the reef. It was subsequently continued on the line of the reef to a depth of 84 feet. The lode in the bottom is 2 feet wide, and assays 2 ounces, 6 dwts. 16 grains of gold per ton. The reef runs east and west through the block and the outcrops show visible gold. A costean trench was cut across the reef 390 feet east of the shaft, and the reef, though small at this point, shows good free gold.—Iolanthe. An east and west reef runs through this block, which at the western end just outside the boundary is cut off by a dyke. A prospecting shaft was sunk on the reef to a depth of 80 feet, in the bottom of which the lode is 2 feet 5 inches wide, assaying 1 ounce 10 dwts. 12 grains per ton.

MCKENZIE GOLD MINES.—Report from this company's property McK

AUSTRALIAN.

ARMADALE.—Fortnightly report June 8:—No. 3 shaft sunk an additional 21 feet, total depth from surface 136 feet. Lode full width of shaft and improving in appearance as depth is attained. Water increases to 15 gallons per hour, and my opinion will increase still more as the vertical strata are now giving out water; previously it was only the horizontal floors which gave out water.

AUSTRALIAN.—Mine report of Mr. John James, manager, dated June 4: During the past fortnight the shaft has been sunk 24 feet, total 270 feet, and timbered 27 feet, total timbered 250 feet. The country passed through was conglomerate, a little disturbed owing to a small crosscourse coming in, but I expect better country soon.—765 feet level. The crosscourse here has been extended 20 feet, total 65 feet from the shaft. At 60 feet we passed through the slate country. In the adjoining claim south—the Smithfield and Phoenix Golden Pile Company—the top bed of slate was about 120 feet thick, so you will note this bed is only half the thickness with us. Everything about the mine and machinery is in good working order.

BAYLEY'S NO. 2 SOUTH.—The following fortnightly report dated June 10: has been received from the mines manager, Mr. W. M. Vivian: In the winze at the 100 feet level 4 feet has been sunk, making the total depth 21 feet. The men having been employed most of the time in timbering and securing. The reef has narrowed considerably, and is at present only a stringer about an inch wide. At the 100 feet level south 9 feet has been driven, making the total distance from the crosscourse 36 feet. Here also the reef has become disorganized, being not more than 3 inches wide. The 100 feet level north has been driven a further distance of 12 feet, making the total distance from No. 1 shaft 30 feet. The reef is 2 feet wide, and worth 5/4 ounce of gold per ton. At the water shaft timbering and securing is being carried out.

BRITISH BROKEN HILL PROPRIETARY.—Mining manager's report for the week ending June 10: Blackwood shaft, 130 feet level. Long west crosscut extended 22 feet, total length 245 feet. Have been widening crosscut connecting shaft with east vein to allow a double track to be laid, so that larger trucks can be used. Also widening north drive in places for the same purpose; this work will be finished in a few days. The contractors working in the east vein stopes are making lead ore of usual grade. A good deal of filling has been done during the week in stopes over 100 feet level.—Howell shaft, 100 feet level. On 2nd and 3rd floors in northern face of far north stopes we are opening up splendid breasts of lead ore; all ore broken from this point is being stacked in stopes for the present. We hoisted 6 tons carbonate ore averaging 41 per cent. lead and 5 ounces silver per ton, but the balance of the ore broken has been dumped into the ore shoot and on the floors, as our surface floors are filled up.—300 feet level. Are opening up in sulphide ore on sill and 2nd floors, so as to make room for square set timbers. The ore broken is of good lead value. The face of southwesterly drive looks somewhat disturbed at present, and sulphide ore is harder. We mined 75 tons sulphide ore in opening out, which averaged 20 per cent. zinc, 2 per cent. lead, and 3 ounces silver per ton, and we are now prepared to mine and hoist large quantities of ore almost at any time.—Surface. All small details on erection of change and bath house will be finished in a day or two.—Electric light. Are pushing on with installation inside jig plant with all despatch. Jig plant portion of pump gear not arrived yet, but expect to start work during coming week.—Week's assays. Carbonate ore lead from 16/2 to 51/2 per cent., silver from 1/2 to 15/2 ounces per ton. Sulphide ore, lead from 12 to 43/2 per cent., silver from 7/2 to 11/2 ounces per ton. Zinc from 17/2 to 24/2 per cent.

COLUMBIA (Charters Towers).—The mining agents report as follows for the fortnight ending June 3: The contractors have sunk the shaft an additional 16 feet, making the total depth 251 feet. The country is still very much disturbed and requires timbering close down to the bottom. Some time was lost awaiting delivery of shaft timber. The foundation for the air-compressor is made and ready to receive the bed-plate. The brickwork of the boiler is also finished, and good progress is being made with erection of chimneys.

CONTINENTAL AND WESTERN AUSTRALIAN TRUST.—The following information is to hand by mail from Mr. Edward Hooper, the company's manager in Western Australia:—Abbott's lease. This property has been purchased, and is being actively developed by the company. Shaft in protection area is 95 feet deep. The reef is 3 feet in width, and assays 2 ounces per ton. Shafts in 5 acre lease is 50 feet deep, reef 2 feet wide, sampling at 2 ounces per ton. Value of stone raised and in sight is 38 dwt., to 2 ounces per ton. The reef has improved everywhere in value and size. The property is a valuable one.—Golden Towers lease. Shaft is 81 feet deep. Reef is 2 feet wide, making rapidly, showing visible gold throughout. The quartz is of an excellent nature, and the lode generally appears permanent. Prospects from 69 to 81 feet show 3 ounces gold per ton.—Maori King. This promising property at Broad Arrow, situated near the Paddington Mine, has been taken under option. The reef has been very little opened up, but samples have yielded up to 1 ounce 19 dwt., 5 grains per ton. The lode is of well formed character, with a strongly marked line of outcrop.—Egeron lease, Broad Arrow. This property has also been taken under option. A great deal of alluvial gold has been won from the surface, and a shaft has been sunk to a depth of 100 feet. The reef is well formed, and is apparently a true fissure lode. The mine will be vigorously prosecuted while under option, and its value proved.

CHAVEN'S CALEDONIA.—The following fortnightly report has been received from the mine, dated Charters Towers, June 4:—In the underhand stopes from No. 8 level the reef averages about 7 inches in thickness. In the No. 7 level on the hanging wall reef has been extended a further distance of 9 feet, making a total of 77 feet from the starting point, and the reef in this level averages about 6 inches of good quality stone. In the eight stopes over this level the reef averages from 6 to 10 inches of fair quality stone. The haulage of quartz for the company for this fortnight is 55 tons, which has all been carted to the syndicate mill, and we have cleaned up a crushing of 175 tons for 230 ounces 12 grains of smelted gold. Hooper and party over No. 8 level have got about 24 tons of stone broken. Daddow and party have extended No. 5 level a further distance of 2 feet, making a total of 33 feet from starting point. This party have got about 21 tons of stone broken.—Gribon reef, and a shaft in the Victor reef. This reef averages from 6 inches to 2 feet 6 inches of heavy mineral stone. This party have got about 33 tons of stone broken.

DOLLAR GOLD (Galgo).—The mine manager reports under date June 10 as follows:—The main shaft is now down 122 feet. The hauling and pumping machinery are en route to the mine.

EAGLEHAWK CONSOLIDATED.—The following fortnightly report has been received from the mine, dated Maldon, June 8:—I beg to report that the shaft has been sunk a further depth of 125 feet, or 1228 feet from the surface. This completes the second 100 feet. We are now putting in the penthouse for the next 100 feet. When this is finished we will timber to the plat, and then commence to cut out. It will be a much larger plat this time on account of shifting the winch down to this level to sink the next 100 feet. We have ample timber on the mine to do the necessary timbering for the 100 feet that has been sunk.

FREDERICK THE GREAT.—Copy of letter from Bendigo, dated June 12:—We have the honour to report to you the following progress in your mine during the past fortnight. The level south at No. 5, or 680 feet from the surface, has been driven a further distance of 19 feet and timbered total south of south crosscut 52 feet. The stone on the east side of this level is still mixed with sandstone. The stone on the west side is of promising appearance, showing a little gold. The stone in the stopes over this level is of nice appearance, and shows a little gold. A second stope will be started next week. The level south at No. 6, or 760 feet from the surface, has been driven a further distance of 21 feet and timbered. Total south of main crosscut 56 feet. The stone in this level looks promising, and carries muriatic and galena, but no gold has been seen yet. Have cut out the west side of the 560 feet south level, and made preparations for sinking a winze at a point 600 feet south of the main crosscut, and 90 feet south of the winze already connected with the 560 level, and commenced sinking this winze to day. On the 6th inst. we cleaned off the batteries, and obtained 75 ounces 13 dwt. of gold from 450 loads. This includes the partial cleaning up of 20 ounces 10 dwt. mentioned in our last report. We were much disappointed with this return, but think that the returns are likely to improve as we work higher on the reef. The tributaries washing the surface have obtained 74 dwt. gold.

GLADIATORS.—Professor Nicholas wrote under date June 10: Work of development is being pushed ahead vigorously throughout the mine. In No. 5 shaft the reef is evidently quite 15 feet thick. In Barrier Queen lease shaft a new body of quartz has just been discovered which will be broken into during the London director, Matthew Taylor Brown's inspection with me in a few days. I shall endeavour to send plans and sections of the mine workings on my return.

GREAT FINGALL REEFS.—Report for the week ending June 8: No. 1 shaft, 50 feet level west crosscut. Cut reef at 45 feet from shaft. Reef split into several veins, averaging altogether 1 foot in width. Stone gives a very fair prospect in pan.—No. 3 shaft (main) 132 feet level west crosscut. Passed through several small veins of quartz in this crosscut. Crosscut has been discontinued.—South drive on east. We have started to drive south on this reef, and so far as we have gone, is opening up no better than in the north drive. The reef at the start was 3/4 feet wide, but averages now only a foot in width, and poor in gold.—No. 8 shaft, 50 feet level south drive on reef. This reef is still small, averaging only 4 inches in width. Next week we shall try this reef to the north.—Erection of plant. The building in of the boilers is progressing satisfactorily. The sills of popped legs have been squared up and mortised, and have been hoisted on to dump at main shaft. The collar set for main shaft has been cut out, and the runner frame for cages is now in hand. Probably will be ready to hoist popped legs by end of coming week.—(Signed) G. W. W. Mackintosh, mine manager.

GREAT REEF.—Mr. Sherlaw reports under date of June 17: Main shaft sunk a further 9/4 feet, making 71 1/4 feet. Reef about 3 1/2 feet wide, same value as last reported. The bulk of the machinery is now on the mine, and the erection is being pushed forward with all speed. We can draw all our water from the lakes. I have the piping and pump in readiness.

KINSELLA.—Mine report for fortnight ending June 11: 434 feet level north stope, section 14. Lode here averages 3 1/2 feet, and have six men engaged stoking.—43 feet level north intermediate winze, section 14. This is now 6 1/2 feet below 43 feet level. Lode 5 feet wide. This leaves about 15 feet further to go to reach the back of the 100 feet level north. Four men in this winze.—Intermediate stopes north and south of No. 2 winze, section 21. Eight men in these stopes. Reef averaging 1 1/2 feet.—100 feet level north drive, section 14. This drive has been extended 20 feet for fortnight, making total distance 252 feet from main crosscut. This leaves 3 feet to drive to reach intermediate winze in course of sinking from 43 feet level. Six men in this drive. Lode 11 feet thick at this point, but only carrying 2 feet of stone footwall side of lode, 100 feet level south drive, section 21. Six men were put into this drive at beginning of fortnight, and have driven 17 feet for that time, making a total distance of 394 feet from main crosscut. Lode 6 feet thick. It will take 48 1/2 feet further to reach No. 3 winze south.

MOUNT HOWE CONSOLIDATED.—The manager under date of June 17 reports: The Regina shaft has been sunk a further depth of 5 feet, making a total of 125 feet. The flow of water is increasing. A telegram since received states that at a depth of 219 feet a strong body of water giving at least 400 gallons per hour has been struck. When we have gone a further depth of about 10 feet I intend crossing out the two reefs that have been crossed at the 100 feet level, and to go further east so as to prove the value of reefs outcropping on the surface further east than those we have already proved at the 100 feet level. At this depth we should have sufficient water supply for our purposes. The south level has been driven on the lode a further distance of 10 feet, total 56 feet. The north has been driven 6 feet, making a total of 125 1/2 feet. We have just struck in the face of the south heading Regina shaft some

very nice looking stone showing visible gold peppered on the face of it. The reef maintains its thickness. I think we are in the vicinity of a rich shoot.

MENZIES CONSOLIDATED GOLD.—The following information has been received from the manager at the mine, under date Menzies, June 13: Princess Eva claim, shaft. The enlargement of the main Eva shaft has now been completed from top to bottom (149 feet). The size of the shaft is 19 feet by 4 feet in the clear. We are now taking out the 30 feet of water standing in the shaft, and shall then resume sinking to the 203 feet level. Here we shall require to enlarge the shaft for a depth of 30 feet to make room for the pumps. The crosscut east at the 110 feet level at the main shaft has been extended a further distance of 23 feet. There is nothing calling for remark at this point.—Princess Ada claim, shaft. Ladder ways have been fixed in the Ada shaft from surface to the 110 feet level. We are erecting a horse whip for hauling.—St. Albans' group, main shaft. The main shaft at the St. Albans' has been sunk to a further depth of 5 feet, making a total depth 183 feet. The country rock is still very hard, although in the last foot or so we appear to be getting into softer country.—North shaft. No work has been done here during the past fortnight owing to the difficulty of getting experienced miners.—Machinery. The machinery is all working satisfactorily.—General. The health of the camp is very good and the weather is beautifully cool. Everything is going on satisfactorily.—Office note. A 23 stamp mill complete has been ordered from Messrs. Martin and Co., of Gawler (Adelaide), for delivery in September month.

MOUNT LYELL.—Engineer in charge of mine reports for week ending June 5:—No. 1 tunnel, north drive. Distance driven for week 2 feet, total 33 feet.—No. 3 tunnel, south drive. Distance driven for week 3 feet, total 587 feet.—No. 4 tunnel, south drive. Distance driven for week 3 feet, total 503 feet. Face still very hard.—No. 4 tunnel, south drive, No. 3 crosscut. Distance driven for week 2 feet, total 41 feet. Face still very hard.—No. 4 tunnel, south drive, No. 2 rise. Rise put up 2 feet during the week, total 30 feet.—No. 4 tunnel, south drive, No. 4 crosscut. Distance driven for week 2 feet, total 24 feet. Value of ore in this face still improving.—No. 4 tunnel, south drive, No. 3 rise. Timbering of rise has been carried on during the week.—Surface work, benches. The excavation of overburden at Nos. 1 and 2 benches has been carried on during the week, exposing ore of good value. At No. 2 1/2 bench the breaking of ore is being proceeded with. A blacksmith's shop with two forges has been erected at No. 2 bench. Air compressor and rock drills have been running during the week. Good progress is being made with new assay office.—Progress report for week ending June 5:—Hauling line. Top yard plate laid. Erection of brake nearing completion.—Crushing plant. Crushing silicious and limestone flumes, finishing off smaller water connections of No. 1 blast furnace, No. 2 waiting to be blown in. Laboratory finished.—Coke, 65 tons received. Weather dry and frosty.—Superintending railway engineer reports for week ending June 1: Rails were laid to day into the big cutting at 15-Mile. Hope to start remaining four bridges next week. All earthworks completed, except Murray's cutting in Hall's Creek, which will take another week. Offay and Harvey have completed their contract and have received final certificate.

NO. 7 NORTH-EAST QUEEN.—The following fortnightly report has been received from the mine dated Charters Towers, June 5: I beg to report that on the 25th ultimo Wherry and party cleaned up a crushing of 52 tons 10 cwt. for a yield of 90 ounces 18 dwt., 18 grains of smelted gold. The reef in their stopes still looks very well, from 8 inches to 2 feet 6 inches in thickness. Mount and party also crushed 14 tons 5 cwt., during the fortnight for about 3 ounces of restored gold. This party gave up their block. Anderson and party are still driving. They have a little stone, but nothing to speak of, though the formation looks promising enough. Ferguson and party are still driving from the level above to hole through into their stopes with but little stone in the drive at present. Penhalwick and party are crushing about 41 tons, which will be put through to-night, and is estimated to go about 3 ounces to the ton. This crushing yielded 131 ounces 17 dwt., 18 grains of gold.

NORSEMAN.—The following is an extract of letter received from the mine manager on the 21st inst.: R-report for week ending June 8. During the past week work has been carried on as usual without any material change to report.—Adit. This still continues in good working country, and good progress is made. We are leaving the quartz untouched at present, as we have no room to dump it. Three drill holes for sampling purposes were put into the reef 4 feet without reaching the hanging wall, resulting in good payable prospects.—Tunnel. The country is improving, and better progress is being made. Expect to cut the reef at end of coming week.—Hardy Norseman, still engaged in widening and timbering the shaft, and have secured the brow of the open cut, where the reef is fully 10 feet wide. Three more sets of timber will complete the shaft to surface, thus making 80 feet. Better progress will be made from that depth, as the ground is more solid and the grade regular.—Mildura main shaft. Good progress has been made in this shaft, the reef is still of good quality, and is quite 6 feet wide at present bottom.—Viking. The straightening of the main drive to the hanging wall portion has been completed. The drive will be completed northwards on the course of the reef by contract. Everything is proceeding satisfactorily, and developments are most gratifying.

PREMIER GOLD (W. A.).—Report dated May 23: Drive north of vertical shaft continues to look well, worth 3 ounces of gold per ton for at least 7 feet wide. Stopping along surface between central and old vertical shafts. Reef here is over 20 feet wide. At present are carrying stopes from 8 to 10 feet wide. Shall continue this until tramroad laid down in level below. These stopes continue to yield good stone, worth 2 ounces per ton. 50 feet north of old vertical shaft we have commenced to sink winze to connect with 22 feet level going in this direction.—Water shaft. Shall not sink this deeper at present, will crosscut for reef at 200 feet level, also crosscut at 106 feet level from old vertical shaft as soon as possible. Machinery continues to work well, and water in Cummings' and Williams' well increased to 15,000 gallons per day. On north lode shaft sunk vertically on hanging wall side of western reef, and reef intersected at depth of 44 feet by a crosscut driven 9 feet west. Reef here is 3 feet wide, with good walls, and carries payable gold. Again resumed sinking to strike reef in shaft. Total depth of shaft 46 feet on eastern reef. Vertical shaft sunk 57 feet. Last 33 feet been in reef without as yet striking footwall. Batteries put through 118/4 tons, yielding 331 ounces 4 dwt. good quality gold.

SCOTTISH WESTRALIA.—General Gordon north. This property was most successfully floated in the colony of Western Australia, the total capital of £60,000 being largely over-subscribed immediately on the opening of the lists. Handsome profits were secured for Scottish Westralia (Limited) both in cash and fully paid shares. As these shares, and also the shares of the adjoining General Gordon Mine, are already being actively enquired for in London, they are likely to fulfil the promise held forth by our agents at Coolgardie, of rising to a very considerable premium. The directors regret that in the case of individual applications by shareholders of Scottish Westralia (Limited) an allotment of only 75 per cent. of the amount applied for was possible.—Lindsay's Find. Arrangements are almost completed for placing this large and valuable property on an independent basis, by forming a proprietary company to develop the eight leases, and as the work proceeds and results justify, to transfer sections of the property to subsidiary working companies. Full particulars will be placed in your hands immediately, and an opportunity of securing an allotment of shares, and of participating in the underwriting on the most favourable terms.—Stanley-Zealandia. The development work on this group of properties has been most extensive and thorough, and the leases are now proved to be richly gold-bearing from end to end. The properties are described, both by our engineers and in private letters from the colony, as being likely to become one of the greatest mines on the Coolgardie gold fields. Overtures have been received for floated the property in Western Australia, and if it be deemed expedient to accept these, careful provision will be made, and ample time given to enable shareholders of Scottish Westralia (Limited) to secure a full allotment of such shares as they may desire to take up. Golden Pig Extended. The purchase of this property has now been completed, and the titles have been transferred to Scottish Westralia (Limited). This company to work the leases has been registered under the title of the Golden Crest Mines (Limited), by which name the property will henceforth be known. Your board, however, is delaying the public flotation to permit of further exploration work, in view of the recent discovery of a new reef in the immediately adjoining property, assaying 18 ounces of gold to the ton, and proved to run right into the Golden Crest leases. Our engineers have examined this ore body, and cable that it "will enormously increase the value" of our property.—Seabrook Estate. Pending final arrangements as regards this property, 500 acres have been cleared and seeded. The latest report from the manager states that everything is proceeding satisfactorily, and for the season is maintaining its favourable nature, good results should be forthcoming.—Hope's Hill Gold Mine (Limited). A Scottish Westralia (Limited) holds a large interest in this property shareholders will be pleased to learn that a thoroughly competent manager has been appointed, and that the work of opening up the mine is being energetically pursued.

WEBSTER'S FIND.—Mr. Sherlaw reports under date of June 17: No. 2 shaft is now down 103 feet and 50 feet of level driven. No. 3 shaft 110 feet 89 feet; reef 3 feet wide and showing very good gold. Fresh water for all our requirements have gone, is opening up no better than in the north drive. The reef at the start was 3/4 feet wide, but averages now only a foot in width, and poor in gold.—No. 8 shaft, 50 feet level south drive on reef. This reef is still small, averaging only 4 inches in width. Next week we shall try this reef to the north.—Erection of plant. The building in of the boilers is progressing satisfactorily. The sills of popped legs have been squared up and mortised, and have been hoisted on to dump at main shaft. The collar set for main shaft has been cut out, and the runner frame for cages is now in hand. Probably will be ready to hoist popped legs by end of coming week.—(Signed) G. W. W. Mackintosh, mine manager.

WEBSTER'S FIND.—Mr. Sherlaw reports under date of June 17: No. 2 shaft is now down 103 feet and 50 feet of level driven. No. 3 shaft 110 feet 89 feet; reef 3 feet wide and showing very good gold. Fresh water for all our requirements have gone, is opening up no better than in the north drive. The reef at the start was 3/4 feet wide, but averages now only a foot in width, and poor in gold.—No. 8 shaft, 50 feet level south drive on reef. This reef is still small, averaging only 4 inches in width. Next week we shall try this reef to the north.—Erection of plant. The building in of the boilers is progressing satisfactorily. The sills of popped legs have been squared up and mortised, and have been hoisted on to dump at main shaft. The collar set for main shaft has been cut out, and the runner frame for cages is now in hand. Probably will be ready to hoist popped legs by end of coming week.—(Signed) G. W. W. Mackintosh, mine manager.

WOODSTOCK GOLD.—The mine manager under date June 8 reports as follows:—Maria lode No. 1. During the past four weeks developments very satisfactory. Within the last 25 feet the lode is broken to 5 feet wide. The work is confined to hanging wall portion, but we will find a footwall section shortly by drill holes. Sacks overhead amount to near 300 feet. No. 2 level, 40 feet east of the line of this level the crosscut intersected a lode 4 feet thick, averaging £1 13s., which is, I believe, the main branch of the Maria, and I am driving southward on it. In the No. 2 level crosscut I believe a large lode passed through some distance back was the Woodstock lode, and I have now driven 25 feet each way upon it. It is from 3 to 8 feet thick. A new lode has been cut on the surface by a party of miners working for the Waverley Company excavating a tract to their property. This averages 3 feet thick, and at present gives £1 5s. per ton. I have called it the Waverley, and will open out on it before next report at surface. I intend also driving a level from Hauraki gully to connect with the No. 2 crosscut for ventilation, which will cut this new lode.—No. 3 level. Maria lode here averages 6 feet thick, very hard, but rich. The value of all the ore from 30 samples being £1 12s. per ton, and has every indication of continuance of this rich deposit. No. 4 level has been extended 20 feet, disclosing three distinct gold and silver bearing lodes, varying from 3 to 6 feet thick, divided by narrow veins of country rock. The middle one averaging 3 feet is, I think, Maria lode, as it presents many of the characteristics of that ore body. This when cut out the result cables home of £2 15s. per ton. Ivanhoe section, No. 4 level, is now in 45 feet, and I have recently intersected a lode 2 feet 6 inches thick. The upper workings have yielded in the past a large amount when not 50 per cent. of the contents was redeemed. I am now driving northwards upon this lode, which should improve in size and quality, but if not we must push the crosscut further east and endeavour to locate the right lode. I am profiting in this matter by the experience gained in old workings. The men engaged upon the construction of the new mill do not now average more than four days work per week, consequent upon the broken weather, so I fear it will not be possible for contractor to complete his work within the specified time. The framework of the buildings is now complete, and a start has been made to cover the roof and walls with galvanised iron. The

THE GLENROCK CONSOLIDATED, LIMITED.

The following circular has been issued to the shareholders:—

West Australian Interests.

Since the date of the board's last circular considerable progress has been made in this section of the company's operations, and the information received to date will be interesting to the shareholders.

La Marguerita.

This property consists of a block of 24 acres, adjacent to Block 53 of the Hampton Plains Estates in the Coolgardie gold field, and was pegged out for this company in March last. The necessary work of development, for opening up the property by means of a shaft, was immediately put in hand, and prospects are decidedly encouraging, a solid reef of very promising quartz having been proved to a distance of some 130 feet.

Kurnalpi District.

Mr. W. H. Tinney, after inspecting most of the gold fields, has been considerably impressed with the appearance of the Kurnalpi division of the Coolgardie district, and after careful personal inspection of various parts of this district, he has equipped a prospecting party, who are now working for this company in that field. According to reports coming forward, the whole district is highly auriferous, and it is stated that no part of the Yilgarn gold field has produced more alluvial gold in the same space of time than the Kurnalpi division, and the directors are pleased to report that they have been able to secure a large interest in this field, particulars of which are given herewith, and which they hope will prove of considerable value as developments progress.

Leviathan Lease.

With regard to this property in the Kurnalpi district, it will be remembered that some of the ore-bodies assayed as high as 36 ounces of gold to the ton, and it was considered necessary to instruct Mr. Tinney to exercise great care before completing purchase. Mr. Tinney pointed out at the time that he did not anticipate that the reef would show throughout such rich gold value, but it was proof that excellent stone did exist in the mine. Meantime, developments have been progressing. Latest advices by cable report the value of ore at bottom of shaft to be 2 ounces 10 dwts. gold per ton, and the property has been submitted to as complete an investigation as possible, and has now been very favourably reported on by Mr. G. R. Fearnley, a well known mining engineer, and purchase has been finally authorised. Mr. Tinney describes this property in his report as "a 12 acre lease situate 6 miles north of Kurnalpi. The property embraces the crown of low hill, along the summit of which three parallel reefs outcrop. The surrounding flats and gullies have been extensively worked for alluvial, and proved very rich. As far as can be seen at present the gold must have been derived from the reefs under notice. The massive main reef holds a regular course, in many places its width cannot be determined, as neither wall is in sight; where measurements can be made its width is from 8 to 12 feet. The noteworthy features are that the gold is in a finely divided state, and exists in the quartz itself and not in any matrix of iron. There are by measurement 120 tons of quartz at surface."

Mr. Tinney considers that the adjacent properties, consisting of 42 acres, and which he states contains some hundreds of tons of alluvial ground worth milling, will carry the vein bodies from the more developed claims, and an opportunity having occurred by which the whole of this extensive area can be obtained at a most reasonable cost your directors have taken advantage of the opportunity to acquire the same. Mail advices from Coolgardie, dated June 17, contain a report from a prospector who has lately visited the Leviathan Mine. This miner reports as follows:—

"I went out to see the Leviathan. They have a splendid reef fully 20 feet wide at the bottom of the underlie. I did not try any of the stone, but saw gold in the face. I think this property will turn out one of the good things of the district when properly opened up."

The Leviathan lease, with the adjacent claims, will give a total area of about 55 acres, and it is proposed, so soon as the reports and plans are received, to form a subsidiary company, and arrangements are being made to ensure its successful flotation.

Prospecting Kurnalpi District.

The prospecting party in the Kurnalpi district has only been at work a short time, but the gratifying news has now been received by cable that 48 acres have been applied for to the south-east of Kurnalpi. Regarding this Mr. Tinney reports by cable:—"The lode can be seen on the surface coursing the whole length of the claim. The reef shows visible gold." Subsidiary companies will be formed as soon as practicable for the working of such properties, and care will be taken to capitalise them only on a sound basis, the object your directors have in view being to afford shareholders the utmost possible benefit derivable from the arrangements they are endeavouring to make.

Premier Mine, New Zealand.

Latest advices by mail received from the general manager, Mr. W. J. Stanford, under date May 21, report with regard to developments:—

"A tremendous upheaval disturbed the golden shoot, and it cannot make strong and rich all at once. Appearances are in our favour, and any week we may get into settled golden quartz again."

Sunrise Mine.

"The men here are making much better progress, and there are now only about 200 feet still to be cleared."

PLoughing the Water for Platinum.—A curious method of producing platinum is practised by the inhabitants of the villages on the Tura River in the Russian Government district of Tomsk in Siberia. A raft is constructed and an inclining gutter of boards fastened to it, which at its lower end is provided with an iron plough. While floating down the river they scrape or plough its bottom. The sand scraped out falls into the gutter and passes into a tub filled with pine boughs, upon which platinum is deposited. The sand of the Tura River and its tributaries is so rich in platinum and its primitive production so profitable that the peasants are abandoning agriculture and devoting themselves to "ploughing the water."—*Colliery Guardian*.

ALLOYS.—A paper on a new method of preparing alloys was recently read before the Paris Académie des Sciences by M. Moissan, according to whom alloys of refractory metals can be prepared by projecting a mixture of the oxide with powdered aluminium into a bath of liquid aluminium. The heat set free by the oxidation of the aluminium is sufficient to carry on the reaction. Alloys of aluminium with nickel, molybdenum, tungsten, uranium, and titanium have been obtained in this way. In a paper entitled "A Study of Melted Vanadium and its Carbide," M. Moissan says: Vanadium pentoxide, reduced by carbon in the electric furnace, yields an ingot of metal which always contains an appreciable amount of carbon. If the time of heating is as short as possible, a metal containing only 5 per cent. of carbon can be obtained; by prolonging the time of heating the percentage of carbon is increased to 18.5 per cent., indicating the formation of the carbide VC. The carbide is not attacked by water at the ordinary temperature. Vanadium forms alloys with iron, copper, and aluminium, but not with silver.—*Iron and Coal Trades' Review*.

NEW COAL STAITHS AT BLYTH.—The North-Eastern Railway Company have completed the construction at Blyth of new coal staiths at a cost of about £50,000. The Cambolis branch line has been doubled for a length of about two miles, from West Sleekburn Colliery to Cambolis Colliery, and thence there is a new line of 1½ miles to the new staiths. The standage accommodation near the staiths is equal to between 5000 and 6000 tons of coal. Four vessels can load at one time. The new staiths were opened on Monday.

THE MINING SCHOOL,
CAMBORNE.

SESSION. 1896-97.

JOSIAH THOMAS, Esq., J.P. (Managing Director of Dolcoath Mine, Limited), Chairman of Committee.
Mr. J. J. BERNINGER, A.R.S.M., F.I.C., F.C.S., Principal.
Mr. JAMES NEGUS, Secretary.

THE School is situated in the centre of the Mining District of Cornwall.

Extensive additions were made to the buildings in 1895, including a larger Laboratory, with new Furnace Room, and Vanning and Lecture Rooms.

A portion of one of the mines of the neighbourhood has been acquired, so that Students may obtain a knowledge of Practical Mining under the authority of the School, and with the supervision of competent Instructors.

The acquisition of the Mine by the School enables the instruction in Mine-Surveying to be made of a more practical character.

Facilities are afforded for the study of the principles of Mechanics as applied in the construction of Machinery. Particular attention will be given to the Mechanics of Machinery, Technical Drawing, and Strength of Materials.

The subjects taught include:

CHEMISTRY, METALLURGY, MINERALOGY, &c.; Mr. J. J. Beringer, A.R.S.M., F.I.C., F.C.S.—MINING, MINE SURVEYING, &c.; Mr. W. Thomas, Assoc. M.Inst., C.E., F.G.S., M.I.M.M.—MATHEMATICS AND THEORETICAL MECHANICS; Mr. A. Bell, M.A.—PRACTICAL MECHANICS; Mr. J. C. Keast.—MACHINE DRAWING, STEAM; Mr. T. J. Harvey.—PHYSICS; Mr. C. Davis.—VANNING; Mr. J. Reynolds.—ART SUBJECTS, PLANE AND SOLID GEOMETRY, BUILDING CONSTRUCTION; Mr. F. J. Gardener.

Prospectuses and any further information may be obtained of the PRINCIPAL or SECRETARY.

The Session will commence on Wednesday, the 9th September.

ROYAL MINING ACADEMY,
CLAUSTHAL.

Session, 1896-97.

The LECTURES for the Winter Six Months COMMENCE on the 15th OCTOBER, 1896.

Prospectuses free on application to the Directors of the Royal Mining Academy.

BY ORDER OF THE DIRECTORS.

Clausthal, Harz, 14th July, 1896.

SHIPPING.

CASTLE LINE.—CAPE & NATAL MAILS.

WEEKLY SERVICE FOR THE GOLD FIELDS OF SOUTH AFRICA.—The CASTLE COMPANY'S STEAMERS leave LONDON (East India Dock Basin, Blackwall) every FRIDAY, and sail from SOUTHAMPTON every SATURDAY.

Steamers.	London.	Southampton.
Harlech Castle (via Canaries) ...	July 31	August 1
Norham Castle (via Madeira) ...	August 7	August 8
Doune Castle (via Canaries and St. Helena) ...	August 14	August 15
Dunotar Castle (via Madeira) ...	August 21	August 22
Also for Madagascar and Mauritius.		
Return tickets to all Ports.		

Free Tickets by Castle Express from Waterloo to Southampton. Apply to DONALD CURRIE and Co., 3, Fenchurch Street, London, E.C. West End Agency, THOS. COOK AND SON, 13, Cockspur Street.

UNION LINE.

FOR SOUTH AFRICAN GOLD FIELDS.—WEEKLY SERVICE.—CAPE OF GOOD HOPE, NATAL, and EAST AFRICAN ROYAL MAIL STEAMERS.—The UNION STEAMSHIP COMPANY'S ROYAL MAIL and INTERMEDIATE STEAMERS will sail as follows for SOUTH and EAST AFRICA, calling at MADEIRA and TENERIFFE.

Steamers.	Antwerp.	Rotterdam.	Hamburg.	Southampton.
Mexican ...	July 28	August 1	August 1	August 8
Athenian ...	—	—	—	—
Norman (twin s.s.) ...	—	—	—	—
Greek (twin s.s.) ...	August 11	August 15	August 15	August 22
Calliope at Madeira.		Via Teneriffe.		

Free railway tickets from London and Plymouth to Southampton. Cheap Tickets are issued for Passengers' Friends. The Union Line Express is despatched from Waterloo Station (Main Line Platform) every Saturday.

RETURN TICKETS ISSUED.

Apply to the UNION STEAMSHIP COMPANY (Limited), Canute Road, Southampton; 14, Cockshead Street, London, S.W.; and South African House, 94 to 96, Bishopsgate Street Within, London, E.C.

MR. JOHN HAYES HAMMOND, having returned to England, has renewed his appointment as consulting engineer to the Consolidated Gold Fields of South Africa (Limited) for a term of three years from July 1.

BUSINESS CARDS.

AERIAL ROPEWAYS.

OTTO SYSTEM.

R. E. COMMANS (late Commans and Co.), 6, Queen Street Place, London, E.C.

ASBESTOS.

THE UNITED ASBESTOS COMPANY (Limited), Dock House, Billiter Street, London, E.C. Asbestos Goods of the highest quality.

AUSTRALIAN MINERALS.

COLLECTIONS of AUSTRALIAN MINERALS for Show Case, or for technical purposes supplied to order. Price from £2 2s. upwards. On receipt of order with remittance a collection will be made up and dispatched without delay.

MINES REPORTED ON.

J. B. AUSTIN, Mineralogist, Adelaide, S.A.

EXPLOSIVES FOR MINING.

NOBEL'S EXPLOSIVES COMPANY (Limited), Glasgow. Manufacturers of Gelignite, Gelatine-Dynamite, Dynamite, Detonators, Electric Detonator Fuses, &c., &c.

MAGNETIC ORE SEPARATORS

(KING'S PATENT).

FOR SEPARATING IRON ORE FROM OTHER MINERALS. Apply, FREDK. J. KING, 96, Leadenhall Street, London.

METAL PERFORATORS, &c.

J. & F. POOL,

METAL PERFORATORS & WIRE WEAVERS. COPPERHOUSE, HAYLE, CORNWALL.

SPECIALITIES:—All descriptions of Perforated Metal Plates, Stamps' Battery-Screens, Wire Gauze and Sieves for Foreign and Home Mining, and other Purposes. Export orders carefully and promptly executed.

MINING ENGINEERS.

THEO. F. VAN WAGENEN, E.M., CONSULTING MINING ENGINEER.

Post Office Address: Box 599, Telluride, Colorado, U.S.A. Cable Address: "Van," Telluride, Colorado, U.S.A.

REPORTS AND EXAMINATIONS ON MINES

References: The Columbia University School of Mines, New York, and the Bank of Telluride, of Telluride, Colorado.

F. H. MASON, F.C.S., Metallurgist, Assayer, and Analytical Chemist. Refractory gold ores a speciality. Can be consulted with reference to Nova Scotian properties. Queen Buildings, Halifax, Nova Scotia. Cable address: Mason, Halifax. (Moreing's code).

MINING INSTRUMENTS.

JOHN DAVIS & SON, All Saint's Works, Derby; and 118, Newgate Street, London, Mathematical instruments and miner's safety lamps.

MINING MACHINERY.

FRASER & CHALMERS (Limited), 43, Threadneedle Street, London, E.C. Mining machinery of the most approved design.

THOMAS LARMUTH and CO., Salford, Manchester. Manufacturers of Patent "Hirnant" Plant, Rock Drills, Air Compressors, Sinking Carriages, &c. Agents for South Africa—Messrs. REUNERT and LENZ, Johannesburg.

ROBEY & CO. (LIMITED), Manufacturers of Steam Engines, Mining Machinery, &c. Makers of the Robey Patent Automatic Expansion Gear.—Globe Works, Lincoln.

GATES IRON WORKS, 73A, Queen Victoria Street, E.C. The Gates Rock and Ore Breaker effects a great saving in power.

ORE DRESSING MACHINERY.

THE LÜHRIG COAL AND ORE DRESSING APPLIANCES (LIMITED), 32, VICTORIA STREET, LONDON, S.W.

COMPLETE DRESSING PLANTS for Gold, Silver, Lead, and Copper Ores, &c., designed and erected.

LÜHRIG SINGLE AND COMPOUND VANNERS for Low Grade Ores and Tailings.

IMPROVED BREAKERS, ROLLS, JIGS, AND SEPARATING DRUMS.

Tests made with Samples at London Works Free of Charge.

ORE REDUCTION.

THE CLARKSON-STANFIELD ORE REDUCTION COMPANY (Limited). Process for the treatment of gold, silver, copper, lead, and other ores. Address, 6, Colonial Avenue, Minories, London, E.

ROCK DRILLS.

RICHARD SCHRAM & CO., 17a, Great George Street, Westminster, S.W.

SAFETY FUSE MANUFACTURERS.

THE UNITED SAFETY FUSE CO., Scoville, Cornwall, Manufacturers of all kinds of Safety Fuse for use in Mining, Quarrying, Submarine, and other Blasting Operations.

TUBE MAKER.

GEO. J. CHATTERTON, manufacturer of lead pipe, block tin pipe, and tinned composition gas tube, Caledonian Road, London, N.

THE VICTORIAN GOLD FIELDS (LIMITED),

21 and 22, COPTHALL HOUSE, COPTHALL AVENUE, E.C.

This company, having made arrangements with well-known experts in Australia, is now prepared to provide reports on Mining Properties in any of the Australian Colonies and New Zealand at moderate cost.

Terms can be had and testimonials of experts seen at above

THE UNITED ASBESTOS CO. (Limited),

DOCK HOUSE, BILLITER STREET, LONDON, E.C.



PIONEERS of the ASBESTOS Trade. The ONLY COMPANY in the WORLD owning and working Asbestos Mines both in ITALY and CANADA. All goods are made at our Works, near London, and are of the best possible description.

SPECIFY "SALAMANDER" BRAND.

Depots: NEWCASTLE-ON-TYNE, Quay Side; MANCHESTER, 34, Deansgate; LIVERPOOL, 33, James Street; GLASGOW, 93, Bothwell Street; CARDIFF, 135, Bute Street; BRISTOL, Provident Buildings, Clare Street; ST. PETERSBURG, Gostinie Dvor (interior), No. 51; ANTWERP, Rue Montevideo.

THE UNITED ASBESTOS PATENT "SALAMANDER" DECORATIONS.

PRICES ON APPLICATION.



CABLE MILLS, OLDHAM ROAD, MANCHESTER.

THE FRICTIONLESS ENGINE PACKING CO.

SOLE MAKERS OF LIMITED.

Karmal, Railite, and Metallic Packings.

(OGDEN'S PATENT.)

MANUFACTURERS OF ALL KINDS OF Engine and Pump Packings, Indiarubber Goods, Asbestos Goods, Hair and Cotton Belting.

Highest Awards wherever Exhibited. Send for Price List and Testimonials.

Telegraphic Cable Address: "PACKLESS, MANCHESTER."

"CHAMPION" ROCK DRILLS

Have all the latest improvements resulting from 19 years' practical experience in constant work.

Unrivalled for efficiency and durability in Sinking Shafts, Driving Levels & Tunnels.



THE CHAMPION ROCK-BORER AND AIR COMPRESSOR CO.

SOLE PROPRIETORS AND MANUFACTURERS, E. P. and H. P. VACHER. MAKERS OF ROCK DRILLS, AIR COMPRESSORS, TURBINES, WATER WHEELS, WATER MOTORS, RAMS

MINING MACHINERY. 63, Queen Victoria Street, LONDON, E.C.

Telegraphic Address: "TURNSCREW, LONDON."

WATER-POWER.

TURBINES OF ALL EFFICIENT TYPES.

Hett's Patent Pelton Wheels.

CHAS. LOUIS HETT, HYDRAULIC ENGINEER, BRIGG, ENGLAND

NORTH QUEENSLAND REGISTER. THE LEADING NORTH QUEENSLAND WEEKLY. PUBLISHED AT CHARTERS TOWERS, NORTH QUEENSLAND.

MINING A SPECIALITY.

Subscription £1 4s. per annum; including postage to Great Britain £1 5s. per annum.

Address communications to— THE NORTHERN MINER PRINTING AND PUBLISHING COMPANY, CHARTERS TOWERS, QUEENSLAND.

PUBLICATIONS.

JUST PUBLISHED. JUNE, 1896.

THE

MINING MANUAL for 1896,

By WALTER R. SKINNER.

CONTAINING OVER

1300 Pages of Matter in Four Sections, viz.:— AUSTRALASIAN MINING COMPANIES, MISCELLANEOUS MINING COMPANIES, SOUTH AFRICAN MINING COMPANIES, MINING DIRECTORS.

EIGHTH YEAR OF PUBLICATION.

THE MINING MANUAL for 1896 deals with 2712 Companies, of which 810 are Australasian, 922 are South African, and 980 are Miscellaneous.

The particulars given of each Mining Company include the directors and other officials; date of establishment; seat of operations; description of the property, with the purchase consideration; details of capital; calls; dividends paid; and the financial position as disclosed by the accounts, with extracts from the latest directors' reports.

Special attention has been given in this issue to West Australian Mining Companies, the particulars of these containing, in addition to above, extracts from the prospectus issued by each company.

THE MINING MANUAL FOR 1896,

In Demy 8vo., Cloth, 1356 pages.

PRICE 15s., POST FREE.

London:

26. NICHOLAS LANE, LOMBARD STREET, E.C.

THE LIXIVIATION OF SILVER ORES WITH HYPOSULPHITE SOLUTIONS.

By C. A. STETTEFIELD.

SECOND EDITION. COMPLETELY REVISED. With Two Plates showing Construction of a LIXIVIATION PLANT. Published and Sold in the United States and Mexico by the Author, 567, ALICE STREET, OAKLAND, CALIFORNIA. Price, bound in Cloth, \$5.

For all other countries the sale is conducted by CRAZ and GERLACH (Joh. Stettner), Freiberg in Sachsen, Germany. Price 20s. net.

WORKS on MINING, METALLURGY, and ALLIED SUBJECTS.

A Hand-Book of Gold Milling. By HENRY LOUIS, A.R.S.M., F.G.S., &c. Crown 8vo., 10s. net.

The Golden Quartz Reefs of Australia. By WILLIAM NICHOLAS, F.G.S., with Illustrations. A series of Articles especially relating to the Bendigo Gold Field, Victoria. 2s., Post Free.

A New Guide to the Iron Trade, or Mill Managers' and Stock Takers' Assistant. By JAMES ROSE, of Bateman's Hill Iron-Works. Second Edition. Comprising a Series of New and Comprehensive Tables, practically arranged to show at one view the Weight of Iron required to produce Boiler Plates, Sheet Iron, and Flat, Square, and Round Bars, as well as Hoop or Strip Iron of any dimensions, to which is added a variety of Tables for the convenience of Merchants, including a Russian Table. 2s. 6d.

The Colliery Ready-Reckoner and Wages Calculator. By JAMES IRELAND. 1s. 6d., Post Free.

Tacknote: A Form of Licence to Explore and Search for Mines. Minerals, &c. 1s., Post Free.

Notes on the Philippine Islands: A Pamphlet Reprint. By FRANK KARUTH, F.R.G.S. 6d.

History of the Holmbush, Redmoor, and Kelly Bray Mines: with Several Sections of the Working. By W. F. WILKINSON. 1s.

The Law of Merchandise Marks. By FRANK SAFFORD. Recorder of Canterbury, and a Member of the London Chamber of Commerce. 7s. 6d. LONDON:

THE MINING JOURNAL, 18, FINCH LANE, E.C., and 3, DORSET BUILDINGS, SALISBURY SQUARE, E.C.

TURBINES. FACTS!



Unlike other Turbines, with from 12 to 24 water inlets to supply it with water, our **LITTLE GIANT** Wheel has one Vertical Gate only, so that no waste of water, power, and no stoppages takes place owing to small rubbish lodging in the gates as in other types of turbines.

FULL PARTICULARS SENT FREE.

S. HOWES, HYDRAULIC ENGINEER, 64, MARK LANE, LONDON, AND AT SILVER CREEK, N.Y., U.S.A. E.C.

ONLY GOLD MEDAL FOR ALLOYS, INVENTIONS EXHIBITION.

"PHOSPHOR-BRONZE." (Cog Wheel Brand.)

The Best Alloys for all Wearing parts of Machinery, Bearings, &c.

BEWARE OF ALL IMITATIONS, & SPECIFY THE COMPANY'S MAKE.

BULL'S METAL, Ingots, Forgings, Castings, Stampings, Rods and Sheet. Specially adapted for Mining Work.

The Phosphor Bronze Company (LIMITED).

87, SUMNER STREET, SOUTHWARK, LONDON, S.E.

THE GLASGOW HERALD (ESTABLISHED 1782) IS THE LARGEST & LEADING ADVERTISING MEDIUM OUT OF LONDON.

It is next to *The Times* and *The Daily Telegraph*, each of which it exceeds in extent of Advertising during several months of the year. It is unrivalled among Daily Papers for the completeness of its Reports of the Mining and Metal Markets, besides Commercial and General News for all classes of the community.

HEAD OFFICES: 65-69, BUCHANAN STREET, GLASGOW. LONDON OFFICES: 65, FLEET STREET.

THE STAFFORDSHIRE ADVERTISER. ESTABLISHED 1795.

The Principal County Paper in the Midlands.

Advertisers will find it the BEST MEDIUM for reaching superior classes of readers over large areas centred by Staffordshire fifth county in population and sixth in wealth. Published at Stafford every SATURDAY (Price Two-pence), and to be obtained at Euston and Principal Bookstalls between London, Liverpool, and Manchester.

MACARTHUR-FORREST PROCESS.

TO MINE OWNERS AND OTHERS

Having REFRACRY GOLD ORES hitherto untreatable at a profit, the MACARTHUR-FORREST (PATENT) PROCESS OF GOLD EXTRACTION offers a solution of the difficulty.

The chief features of this Process are:—

SIMPLICITY, ECONOMY IN WORKING, and SMALL COST OF PLANT.

PROPRIETORS:—

The Cassel Gold Extracting Co. (Ltd.)

Head Office—108a, Hope Street, Glasgow.

London Office—23, College Hill, Cannon Street, E.C.

Africa—The African Gold Recovery Co. (Ltd.), Johannesburg.

Australia—The Australian Gold Recovery Co. (Ltd.), 8, Post Office Chambers, Sydney, N.S.W., Charters Towers, Queensland, and Mr. Geo. S. Fowler, J.P., Adelaide.

United States—The Gold and Silver Extraction Co. of America (Ltd.), Denver, Colo.

Mexico—The Mexican Gold and Silver Recovery Co. (Ltd.), 2a, Calle de Providencia, No. 7, Mexico City, Mexico.

Chili—Mr. J. A. W. Murdoch, Calle Almendro, Valparaiso.

New Zealand—The Cassel Gold Extracting Co. (Ltd.), 8, Herald Buildings, Queen Street, Auckland.

Canada—Mr. W. Fellow Harvey, F.C.S., 717 and 719, Fender Street, Vancouver City, British Columbia.

The CASSEL GOLD EXTRACTING Co. (Ltd.) are manufacturers of CYANIDE, suitable for the MacArthur-Forrest Process.

For terms, apply at Head Office of the Company, 108a, Hope Street, GLASGOW.

THE GLENROCK CONSOLIDATED, LIMITED.

The following circular has been issued to the shareholders:—

West Australian Interests.

Since the date of the board's last circular considerable progress has been made in this section of the company's operations, and the information received to date will be interesting to the shareholders.

La Marguerita.

This property consists of a block of 24 acres, adjacent to Block 53 of the Hampton Plains Estates in the Coolgardie gold field, and was pegged out for this company in March last. The necessary work of development, for opening up the property by means of a shaft, was immediately put in hand, and prospects are decidedly encouraging, a solid reef of very promising quartz having been proved to a distance of some 130 feet.

Kurnalpi District.

Mr. W. H. Tinney, after inspecting most of the gold fields, has been considerably impressed with the appearance of the Kurnalpi division of the Coolgardie district, and after careful personal inspection of various parts of this district, he has equipped a prospecting party, who are now working for this company in that field. According to reports coming forward, the whole district is highly auriferous, and it is stated that no part of the Yilgarn gold field has produced more alluvial gold in the same space of time than the Kurnalpi division, and the directors are pleased to report that they have been able to secure a large interest in this field, particulars of which are given herewith, and which they hope will prove of considerable value as developments progress.

Leviathan Lease.

With regard to this property in the Kurnalpi district, it will be remembered that some of the ore-bodies assayed as high as 36 ounces of gold to the ton, and it was considered necessary to instruct Mr. Tinney to exercise great care before completing purchase. Mr. Tinney pointed out at the time that he did not anticipate that the reef would show throughout such rich gold value, but it was proof that excellent stone did exist in the mine. Meantime, developments have been progressing. Latest advices by cable report the value of ore at bottom of shaft to be 2 ounces 10 dwts. gold per ton, and the property has been submitted to as complete an investigation as possible, and has now been very favourably reported on by Mr. G. R. Fearnby, a well known mining engineer, and purchase has been finally authorised. Mr. Tinney describes this property in his report as "a 12 acre lease situate 6 miles north of Kurnalpi. The property embraces the crown of a low hill, along the summit of which three parallel reefs outcrop. The surrounding flats and gullies have been extensively worked for alluvial, and proved very rich. As far as can be seen at present the gold must have been derived from the reefs under notice. The massive main reef holds a regular course, in many places its width cannot be determined, as neither wall is in sight; where measurements can be made its width is from 8 to 12 feet. The noteworthy features are that the gold is in a finely divided state, and exists in the quartz itself and not in any matrix of iron. There are by measurement 120 tons of quartz at surface."

Mr. Tinney considers that the adjacent properties, consisting of 42 acres, and which he states contains some hundreds of tons of alluvial ground worth milling, will carry the vein bodies from the more developed claims, and an opportunity having occurred by which the whole of this extensive area can be obtained at a most reasonable cost your directors have taken advantage of the opportunity to acquire the same. Mail advices from Coolgardie, dated June 17, contain a report from a prospector who has lately visited the Leviathan Mine. This miner reports as follows:—

"I went out to see the Leviathan. They have a splendid reef fully 20 feet wide at the bottom of the underlie. I did not try any of the stone, but saw gold in the face. I think this property will turn out one of the good things of the district when properly opened up."

The Leviathan lease, with the adjacent claims, will give a total area of about 55 acres, and it is proposed, so soon as the reports and plans are received, to form a subsidiary company, and arrangements are being made to ensure its successful flotation.

Prospecting Kurnalpi District.

The prospecting party in the Kurnalpi district has only been at work a short time, but the gratifying news has now been received by cable that 48 acres have been applied for to the south-east of Kurnalpi. Regarding this Mr. Tinney reports by cable:—"The lode can be seen on the surface coursing the whole length of the claim. The reef shows visible gold." Subsidiary companies will be formed as soon as practicable for the working of such properties, and care will be taken to capitalise them only on a sound basis, the object your directors have in view being to afford shareholders the utmost possible benefit derivable from the arrangements they are endeavouring to make.

Premier Mine, New Zealand.

Latest advices by mail received from the general manager, Mr. W. J. Stanford, under date May 21, report with regard to developments:—

"A tremendous upheaval disturbed the golden shoot, and it cannot make strong and rich all at once. Appearances are in our favour, and any week we may get into settled golden quartz again."

Sunrise Mine.

"The men here are making much better progress, and there are now only about 200 feet still to be cleared."

PLoughing the Water for PLATINUM.—A curious method of producing platinum is practised by the inhabitants of the villages on the Tura River in the Russian Government district of Tomsk in Siberia. A raft is constructed and an inclining gutter of boards fastened to it, which at its lower end is provided with an iron plough. While floating down the river they scrape or plough its bottom. The sand scraped out falls into the gutter and passes into a tub filled with pine boughs, upon which platinum is deposited. The sand of the Tura River and its tributaries is so rich in platinum and its primitive production so profitable that the peasants are abandoning agriculture and devoting themselves to "ploughing the water."—*Colliery Guardian*.

ALLOYS.—A paper on a new method of preparing alloys was recently read before the Paris Académie des Sciences by M. Moissan, according to whom alloys of refractory metals can be prepared by projecting a mixture of the oxide with powdered aluminium into a bath of liquid aluminium. The heat set free by the oxidation of the aluminium is sufficient to carry on the reaction. Alloys of aluminium with nickel, molybdenum, tungsten, uranium, and titanium have been obtained in this way. In a paper entitled "A Study of Melted Vanadium and its Carbide," M. Moissan says: Vanadium pentoxide, reduced by carbon in the electric furnace, yields an ingot of metal which always contains an appreciable amount of carbon. If the time of heating is as short as possible, a metal containing only 5 per cent. of carbon can be obtained; by prolonging the time of heating the percentage of carbon is increased to 18.5 per cent., indicating the formation of the carbide VC. The carbide is not attacked by water at the ordinary temperature. Vanadium forms alloys with iron, copper, and aluminium, but not with silver.—*Iron and Coal Trades' Review*.

NEW COAL STAITHS AT BLYTH.—The North-Eastern Railway Company have completed the construction at Blyth of new coal staiths at a cost of about £50,000. The Cambold branch line has been doubled for a length of about two miles, from West Sleekburn Colliery to Cambold Colliery, and thence there is a new line of 1½ miles to the new staiths. The stonage accommodation near the staiths is equal to between 5000 and 6000 tons of coal. Four vessels can load at one time. The new staiths were opened on Monday.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE.

JULY 25, 1896.

THE MINING SCHOOL,
CAMBORNE.

SESSION. 1896-97.

JOSIAH THOMAS, Esq., J.P. (Managing Director of Dolcoath Mine, Limited), Chairman of Committee.
Mr. J. J. BERNINGER, A.R.S.M., F.I.C., F.C.S., Principal.
Mr. JAMES NEGUS, Secretary.

THE School is situated in the centre of the Mining District of Cornwall.

Extensive additions were made to the buildings in 1895, including a larger Laboratory, with new Furnace Room, and Vanning and Lecture Rooms.

A portion of one of the mines of the neighbourhood has been acquired, so that Students may obtain a knowledge of Practical Mining under the authority of the School, and with the supervision of competent Instructors.

The acquisition of the Mine by the School enables the instruction in Mine-Surveying to be made of a more practical character.

Facilities are afforded for the study of the principles of Mechanics as applied in the construction of Machinery. Particular attention will be given to the Mechanics of Machinery, Technical Drawing, and Strength of Materials.

The subjects taught include:

CHEMISTRY, METALLURGY, MINERALOGY, &c.; Mr. J. J. Beringer, A.R.S.M., F.I.C., F.C.S.—MINING, MINE SURVEYING, &c.; Mr. W. Thomas, Assoc. M.Inst., C.E., F.G.S., M.I.M.M.—MATHEMATICS AND THEORETICAL MECHANICS; Mr. A. Bell, M.A.—PRACTICAL MECHANICS; Mr. J. C. Keast.—MACHINE DRAWING, STEAM: Mr. T. J. Harvey.—PHYSICS: Mr. C. Davis.—VANNING: Mr. J. Reynolds.—ART SUBJECTS, PLANE AND SOLID GEOMETRY, BUILDING CONSTRUCTION: Mr. F. J. Gardener.

Prospectuses and any further information may be obtained of the PRINCIPAL or SECRETARY.

The Session will commence on Wednesday, the 9th September.

ROYAL MINING ACADEMY,

CLAUSTHAL.

Session, 1896-97.

The LECTURES for the Winter Six Months COMMENCE on the 15th OCTOBER, 1896.

Prospectuses free on application to the Directors of the Royal Mining Academy.

BY ORDER OF THE DIRECTORS.

Clausthal, Harz, 14th July, 1896.

SHIPPING.

CASTLE LINE.—CAPE & NATAL MAILS.



WEEKLY SERVICE FOR THE GOLD FIELDS OF SOUTH AFRICA.—The CASTLE COMPANY'S STEAMERS leave LONDON (East India Dock Basin, Blackwall) every FRIDAY, and sail from SOUTHAMPTON every SATURDAY.

Steamers.	London.	Southampton.
Harlech Castle (via Canaries) ...	July 31	August 1
Norham Castle (via Madeira) ...	August 7	August 8
Doune Castle (via Canaries and St. Helena) ...	August 14	August 15
Dunottar Castle (via Madeira) ...	August 21	August 22
Also for Madagascar and Mauritius.		
Return tickets to all Ports.		

Free Tickets by Castle Express from Waterloo to Southampton. Apply to DONALD CURRIE and Co., 3, Fenchurch Street, London, E.C.

West End Agency, THOS. COOK AND SON, 13, Cockspur Street.

UNION LINE.



FOR SOUTH AFRICAN GOLD FIELDS.—WEEKLY SERVICE.—CAPE OF GOOD HOPE, NATAL, and EAST AFRICAN ROYAL MAIL STEAMERS.—The UNION STEAMSHIP COMPANY'S ROYAL MAIL and INTERMEDIATE STEAMERS will sail as follows for SOUTH and EAST AFRICA, calling at MADEIRA and TENERIFFE.

Steamers.	Antwerp.	Rotterdam.	Hamburg.	Southampton.
Mexico ...	July 28	August 1	August 1	August 1
Athenian ...	—	—	—	August 8
Norman (twin scw.) ...	August 11	August 15	August 15	August 15
Greek (twin scw.) ...	—	—	—	August 22
Calling at Madeira.				
Via Teneriffe.				

Free railway tickets from London and Plymouth to Southampton. Cheap Tickets are issued for Passengers' Friends.

The Union Line Express is despatched from Waterloo Station (Main Line Platform) every Saturday.

RETURN TICKETS ISSUED.

Apply to THE UNION STEAMSHIP COMPANY (Limited), Canute Road, Southampton; 14, Cockspur Street, London, S.W.; and South African House, 94 to 96, Bishopsgate Street Within, London, E.C.

MR. JOHN HAYES HAMMOND, having returned to England, has renewed his appointment as consulting engineer to the Consolidated Gold Fields of South Africa (Limited) for a term of three years from July 1.

BUSINESS CARDS.

AERIAL ROPEWAYS.

OTTO SYSTEM.

R. E. COMMANS (late Commans and Co.), 6, Queen Street Place, London, E.C.

ASBESTOS.

THE UNITED ASBESTOS COMPANY (Limited), Dock House, Billiter Street, London, E.C. Asbestos Goods of the highest quality.

AUSTRALIAN MINERALS.

COLLECTIONS of AUSTRALIAN MINERALS for Show Case, or for technical purposes supplied to order. Price from £2 2s. upwards. On receipt of order with remittance a collection will be made up and despatched without delay.

MINES REPORTED ON.

J. B. AUSTIN, Mineralogist, Adelaide, S.A.

EXPLOSIVES FOR MINING.

NOBEL'S EXPLOSIVES COMPANY (Limited), Glasgow. Manufacturers of Gellignite, Gelatine—Dynamite, Dynamite, Detonators, Electric Detonator Fuses, &c., &c.

MAGNETIC ORE SEPARATORS

(KING'S PATENT).

FOR SEPARATING IRON ORE FROM OTHER MINERALS. Apply, FREDK. J. KING, 96, Leadenhall Street, London.

METAL PERFORATORS, &c.

J. & F. POOL,

METAL PERFORATORS & WIRE WEAVERS. COPPERHOUSE, HAYLE, CORNWALL.

SPECIALITIES:—All descriptions of Perforated Metal Plates, Stamps' Battery-Screens, Wire Gauze and Sieves for Foreign and Home Mining, and other Purposes. Export orders carefully and promptly executed.

MINING ENGINEERS.

THEO. F. VAN WAGENEN, E.M., CONSULTING MINING ENGINEER.

Post Office Address: Box 599, Telluride, Colorado, U.S.A.

Cable Address: "Van," Telluride, Colorado, U.S.A.

REPORTS AND EXAMINATIONS ON MINES References: The Columbia University School of Mines, New York, and the Bank of Telluride, of Telluride, Colorado.

F. H. MASON, F.C.S., Metallurgist, Assayer, and Analytical Chemist. Refractory gold ores a speciality. Can be consulted with reference to Nova Scotian properties. Queen Buildings, Halifax, Nova Scotia. Cable address: Mason, Halifax (Moreing's code).

MINING INSTRUMENTS.

JOHN DAVIS & SON, All Saint's Works, Derby; and 118, Newgate Street, London, Mathematical instruments and miner's safety lamps.

MINING MACHINERY.

FRASER & CHALMERS (Limited), 43, Threadneedle Street, London, E.C. Mining machinery of the most approved design.

THOMAS LARMUTH and CO., Salford, Manchester. Manufacturers of Patent "Hirnant" Plant, Rock Drills, Air Compressors, Sinking Carriages, &c. Agents for South Africa—MESSRS. REUNERT and LENZ, Johannesburg.

ROBEY & CO. (LIMITED), Manufacturers of Steam Engines, Mining Machinery, &c. Makers of the Robey Patent Automatic Expansion Gear.—Globe Works, Lincoln.

GATES IRON WORKS, 73A, Queen Victoria Street, E.C. The Gates Rock and Ore Breaker effects a great saving in power.

ORE DRESSING MACHINERY.

THE LÜHRIG COAL AND ORE DRESSING APPLIANCES (LIMITED),

32, VICTORIA STREET, LONDON, S.W.

COMPLETE DRESSING PLANTS for Gold, Silver, Lead, and Copper Ores, &c., designed and erected.

LÜHRIG SINGLE AND COMPOUND VANNERS for Low Grade Ores and Tailings.

IMPROVED BREAKERS, ROLLS, JIGS, AND SEPARATING DRUMS.

Tests made with Samples at London Works Free of Charge.

ORE REDUCTION.

THE UNITED ASBESTOS CO. (Limited),

DOCK HOUSE, BILLITER STREET, LONDON, E.C.



PIONEERS of the ASBESTOS Trade. The ONLY COMPANY in the WORLD owning and working Asbestos Mines both in ITALY and CANADA. All goods are made at our Works, near London, and are of the best possible description.

SPECIFY "SALAMANDER" BRAND.

Depots: NEWCASTLE-ON-TYNE, Quay Side; MANCHESTER, 34, Deansgate; LIVERPOOL, 33, James Street; GLASGOW, 93, Bothwell Street; CARDIFF, 135, Bute Street; BRISTOL, Provident Buildings, Clare Street; ST. PETERSBURG, Gostinno Dvor (interior), No. 51; ANTWERP, Rue Montevideo.

THE UNITED ASBESTOS PATENT "SALAMANDER" DECORATIONS.

PRICES ON APPLICATION.



REGISTERED TRADE MARK.

"CHAMPION" ROCK DRILLS

Have all the latest improvements resulting from 19 years' practical experience in constant work. Unrivalled for efficiency and durability in Sinking Shafts, Driving Levels & Tunnels.



THE CHAMPION ROCK-BORER AND AIR COMPRESSOR CO.

SOLE PROPRIETORS AND MANUFACTURERS, E. P. and H. P. VACHER, MAKERS OF ROCK DRILLS, AIR COMPRESSORS, TURBINES, WATER WHEELS, WATER MOTORS, RAMS

AND OTHER MINING MACHINERY. 63, Queen Victoria Street, LONDON, E.C.

Telegraphic Address: "TURNSCREW, LONDON."

WATER-POWER.

TURBINES OF ALL EFFICIENT TYPES.

Hett's Patent Pelton Wheels.

CHAS. LOUIS HETT, HYDRAULIC ENGINEER, BRIGG, ENGLAND

NORTH QUEENSLAND REGISTER. THE LEADING NORTH QUEENSLAND WEEKLY. PUBLISHED AT CHARTERS TOWERS, NORTH QUEENSLAND. MINING A SPECIALITY. Subscription £1 1s. per annum; including postage to Great Britain £1 5s. per annum.

Address communications to— THE NORTHERN MINER PRINTING AND PUBLISHING COMPANY, CHARTERS TOWERS, QUEENSLAND.

PUBLICATIONS.

JUST PUBLISHED. JUNE, 1896.

THE

MINING MANUAL for 1896,

By WALTER R. SKINNER.

CONTAINING OVER

1300 Pages of Matter in Four Sections, viz.:— AUSTRALASIAN MINING COMPANIES, MISCELLANEOUS MINING COMPANIES, SOUTH AFRICAN MINING COMPANIES, MINING DIRECTORS.

EIGHTH YEAR OF PUBLICATION.

THE MINING MANUAL for 1896 deals with 2712 Companies, of which 810 are Australasian, 922 are South African, and 990 are Miscellaneous.

The particulars given of each Mining Company include the directors and other officials; date of establishment; seat of operations; description of the property, with the purchase consideration; details of capital; calls; dividends paid; and the financial position as disclosed by the accounts, with extracts from the latest directors' reports.

Special attention has been given to the West Australian Mining Companies, the particulars of these containing, in addition to above, extracts from the prospectus issued by each company.

THE MINING MANUAL FOR 1896,

In Demy 8vo., Cloth, 1356 pages.

PRICE 15s., POST FREE.

London:

26, NICHOLAS LANE, LOMBARD STREET, E.C.

THE LIXIVIATION OF SILVER ORES WITH HYPOSULPHITE SOLUTIONS.

By C. A. STETEFLDT.

SECOND EDITION. COMPLETELY REVISED.

With Two Plates showing Construction of a LIXIVIATION PLANT. Published and Sold in the United States and Mexico by the Author, 567, ALICE STREET, OAKLAND, CALIFORNIA.

Price, bound in Cloth, \$5.

For all other countries the Sale is conducted by CRAZ and GERLACH (Joh. Stettner), Freiberg in Sachsen, Germany.

Price 20s. net.

WORKS on MINING, METALLURGY, and ALLIED SUBJECTS.

A Hand-Book of Gold Milling. By HENRY LOUIS, A.R.S.M., F.G.S., Crown 8vo., 10s. net.

The Golden Quartz Reefs of Australia. By WILLIAM NICHOLAS, F.G.S., with Illustrations. A series of Articles especially relating to the Bendigo Gold Field, Victoria. 2s., Post Free.

A New Guide to the Iron Trade, or Mill Managers' and Stock Takers' Assistant. By JAMES ROSE, of Bateman's Hill Iron-Works. Second Edition. Comprising a Series of New and Comprehensive Tables, practically arranged to show at one view the Weight of Iron required to produce Boiler Plates, Sheet Iron, and Flat, Square, and Round Bars, as well as Hoop or Strip Iron of any dimensions, to which is added a variety of Tables for the convenience of Merchants, including a Russian Table. 1s. 6d.

The Colliery Ready-Reckoner and Wages Calculator. By JAMES IRELAND. 1s. 6d., Post Free.

Tacknote: a Form of Licence to Explore and Search for Mines. Minerals, &c. 1s., Post Free.

Notes on the Philippine Islands: A Pamphlet Reprint. By FRANK KAHUTH, F.R.G.S. 6d.

History of the Holmbush, Redmoor, and Kelly Bray Mines: with Several Sections of the Workings. By W. F. WILKINSON. 1s.

The Law of Merchandise Marks. By FRANK SAFFORD, Recorder of Canterbury, and a Member of the London Chamber of Commerce. 7s. 6d.

LONDON: THE MINING JOURNAL, 18, FINCH LANE, E.C., and 3, DORSET BUILDINGS, SALISBURY SQUARE, E.C.

MACARTHUR-FORREST PROCESS.

TO MINE OWNERS AND OTHERS

Having REFRACTORY GOLD ORES hitherto untreatable at a profit, the MACARTHUR-FORREST (PATENT) PROCESS OF GOLD EXTRACTION offers a solution of the difficulty.

The chief features of this Process are:—

SIMPLICITY, ECONOMY IN WORKING, and SMALL COST of PLANT.

PROPRIETORS:—

The Cassel Gold Extracting Co. (Ltd.)

Head Office—108a, Hope Street, Glasgow.

London Office—23, College Hill, Cannon Street, E.C.

Africa—The African Gold Recovery Co. (Ltd.), Johannesburg.

Australia—The Australian Gold Recovery Co. (Ltd.), 8, Post Office Chambers, Sydney, N.S.W., Charters Towers, Queensland, and Mr. Geo. S. Fowler, J.P., Adelaide.

United States—The Gold and Silver Extraction Co. of America (Ltd.), Denver, Colo.

Mexico—The Mexican Gold and Silver Recovery Co. (Ltd.), 2a, Calle de Providencia, No. 7, Mexico City, Mexico.

Chili—Mr. J. A. W. Murdoch, Calle Almendro, Valparaiso.

New Zealand—The Cassel Gold Extracting Co. (Ltd.), 6, Herald Buildings, Queen Street, Auckland.

Canada—Mr. W. Pelew Harvey, F.C.S., 717 and 718, Fender Street, Vancouver City, British Columbia.

The CASSEL GOLD EXTRACTING Co. (Ltd.) are manufacturers of CYANIDE, suitable for the MacArthur-Forrest Process.

For terms, apply at Head Office of the Company, 108a, Hope Street, GLASGOW.

TURBINES. FACTS!

Unlike other Turbines, with from 12 to 24 water inlets to supply it with water, our **LITTLE GIANT** Wheel has one Vertical Gate only, so that no waste of water, power, and no stoppages takes place owing to small rubbish lodging in the gates as in other types of turbines.

FULL PARTICULARS SENT FREE.

S. HOWES, HYDRAULIC ENGINEER.

64, MARK LANE, LONDON, AND AT SILVER CREEK, N.Y., U.S.A. E.C.

ONLY GOLD MEDAL FOR ALLOYS, INVENTIONS EXHIBITION.

"PHOSPHOR-BRONZE." (Cog Wheel Brand.)

The Best Alloys for all Wearing parts of Machinery, Bearings, &c.

BEWARE OF ALL IMITATIONS, & SPECIFY THE COMPANY'S MAKE.

BULL'S METAL, Ingots, Forgings, Castings, Stampings, Rods and Sheet.

Specially adapted for Mining Work.

The Phosphor Bronze Company (LIMITED).

67, SUMNER STREET, SOUTHWARK, LONDON, S.E.

THE GLASGOW HERALD (ESTABLISHED 1782)

IN THE LARGEST & LEADING ADVERTISING MEDIUM OUT OF LONDON.

It is next to *The Times* and *The Daily Telegraph*, each of which it exceeds in extent of Advertising during several months of the year. It is unrivalled among Daily Papers for the completeness of its Reports of the Mining and Metal Markets, besides Commercial and General News for all classes of the community.

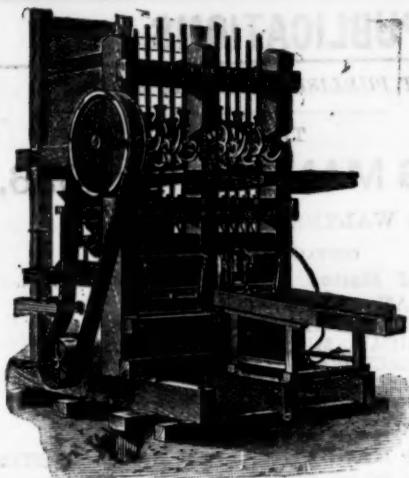
HEAD OFFICES: 65-69, BUCHANAN STREET, GLASGOW. LONDON OFFICES: 65, FLEET STREET.

THE STAFFORDSHIRE ADVERTISER. ESTABLISHED 1795.

The Principal County Paper in the Midlands.

Advertisers will find it the BEST MEDIUM for reaching superior class of readers over large area centred by Staffordshire fifth county in population and sixth in wealth.

Published at Stafford every SATURDAY (Price Two Pence), and to be obtained at Euston and Principal Bookstalls between London, Liverpool, and Manchester.



GATES ROCK AND ORE BREAKER

Still leads the World. It has greatly cheapened the cost of Macadam and ballast, and made low grade ores profitable.

GENERAL MINING MACHINERY OF IMPROVED DESIGNS.

Stamps.

Hoists.

Smelters.

Chlorination Works.

Concentrators.

Rolls.

Elevators.

Cyanide Plants.

Pans and Settlers.

Connersville

Blowers.

Screens, Cars, &c.

Our Specialty is the Complete Plans and Installation of Mills. Engineers ready to visit any part of the World in the Interest of Customers.

BRANCH OFFICES:
136, Liberty Street, N.Y.
73a, Queen Victoria Street, London.
Butte, Montana.
11, Calle de Gante, City of Mexico.

AGENTS for HADFIELD'S MANGANESE AND CHROME STEEL, Manfd. by Taylor Iron and Steel Works.
TREMAIN STEAM STAMP MILLS. AGENTS FOR TRENTON WIRE ROPE.

ESTIMATES AND CATALOGUES FREE ON APPLICATION.

ORDERS AND CORRESPONDENCE SOLICITED.

GATES IRON WORKS.

EUROPEAN OFFICE:
73a, QUEEN VICTORIA STREET, LONDON, E.C.

Cable Address: "GYRATING, LONDON."

CHICAGO CITY OFFICE:
1112, MASONIC TEMPLE.

MAIN OFFICE AND WORKS:
650, ELSTON AVE., CHICAGO, ILLS., U.S.A.

A. & Z. DAW,
11, QUEEN VICTORIA STREET, LONDON, E.C.

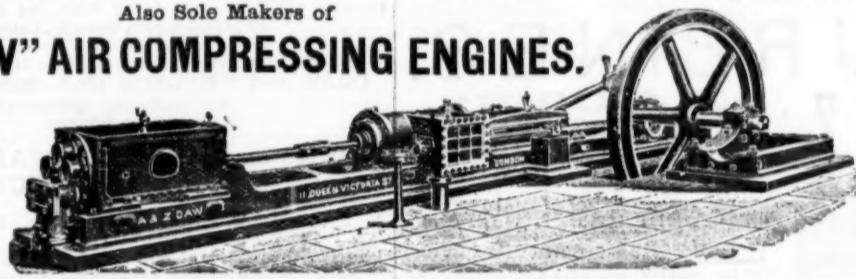
Patentees and Sole Manufacturers of

THE "DAW" ROCK DRILLS,
QUARRY BARS & TRIPODS, & IMPROVED TUNNEL COLUMNS.

Also Sole Makers of

THE "DAW" AIR COMPRESSING ENGINES.

Highest Award,
International
Exhibition of
Mining and
Metallurgy,
London, 1890.



Highest
Award
and
Medal,
World's
Fair,
Chicago,
1893.

Estimates for Rock Boring Plant and General Mining Machinery on Application.

Registered Telegraphic Address: "GULDNES, LONDON."
A1, A.B.C. 4th Edition, and Moreing and Neil's Codes used.

CONTRACTS FOR ALL KINDS OF ROCK DRILLING UNDERTAKEN.

BOURDON'S TRADE **GAUGES.**

E.BOURDON
Lever & Manufacturer

GAUGES.

NEGRETTI AND ZAMBRA,

SOLE AGENTS IN LONDON.

M. BOURDON cautions persons using Steam Gauges that a large number of very inferior instruments are sold, bearing his name, which are not of his manufacture, a great proportion of them also having a forged Trade Mark.

Only GOLD MEDAL for GAUGES at Paris Exhibition, 1878.

NEGRETTI and ZAMBRA are now in a position to supply Admiralty Gauges of the Latest Pattern. PRICE LIST FREE ON APPLICATION.

Negretti and Zambra,

SCIENTIFIC INSTRUMENT MAKERS TO HER MAJESTY, AND BRITISH AND FOREIGN GOVERNMENTS.

THEODOLITES, LEVELS, CIRCUMFERENTERS, MINERS' DIALS, COMPASSES, DRAWING INSTRUMENTS, LEVELLING STAVES, BAROMETERS, THERMOMETERS, AIR METERS, BINOCULARS, TELESCOPES, &c., &c.

Illustrated Price Lists & Estimates Post Free to all Parts of the World

38, HOLBORN VIADUCT.

BRANCHES: 45, CORNHILL, AND 122, REGENT STREET, LONDON.



TONITE

IS RECOMMENDED TO CONTRACTORS, MINERS, PIT SINKERS, QUARRYMEN, AND OTHERS, AS BEING THE SAFEST OF ALL EXPLOSIVES.

TONITE is a most efficient and economical blasting agent, and is largely in demand. It is exempt from freezing and the consequent dangerous process of thawing.

THE COMPANY ALSO MANUFACTURE

GELIGNITE, BLASTING GELATINE, &c.
DETONATORS, Suitable for all Classes of Explosives.
ELECTRIC DETONATORS, High or Low Tension.
ELECTRIC APPLIANCES, of all Descriptions.
SAFETY FUSE.

Address—THE COTTON POWDER COMPANY (Limited),
116, QUEEN VICTORIA STREET, E.C.

CHEAP TRANSPORT.

IMPROVED
AERIAL WIRE
ROPEWAYS.
(Boe and Feddington Patents.)

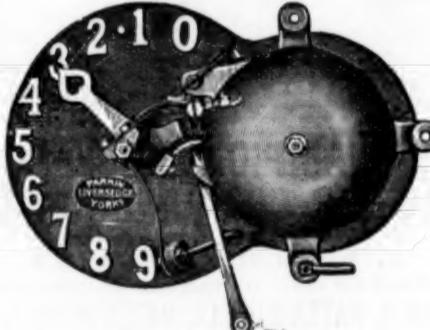


Advantages over other Systems:—

Economy in Cost and Working. Simplicity of Construction with High-Class Material, Long Spans and Steep Gradients Overcome, Reduced Wear of Cables, and Few Supports.

Estimates, Pamphlets, & full Particulars on Application to the PROPRIETORS OF THE PATENTS:
ROPEWAYS SYNDICATE, Limited.
150, Leadenhall Street, London, E.C. •
Telegrams: "ROPEWAYS, LONDON."

Watch this Advertisement



Every other week

PARKIN'S INDICATING SIGNAL BELLS

Are a SURE SAFEGUARD for Enginemen against winding without signal. The Index stands at 0 till the signal is given, when it points to the number of strokes on the Bell.

Entirely Self-Acting. Steel Fittings.

Prices and particulars, PARKIN'S SIGNAL WORKS, LIVERSEDGE, YORKS.

SOLE AGENTS FOR SCOTLAND:

Messrs. ARCHD. BAIRD and SON,
59-61, WATERLOO STREET, GLASGOW.

Export Agent—Mr. STEPHEN HUMBLE, Junr., Emerson Street, Southwark, S.E.

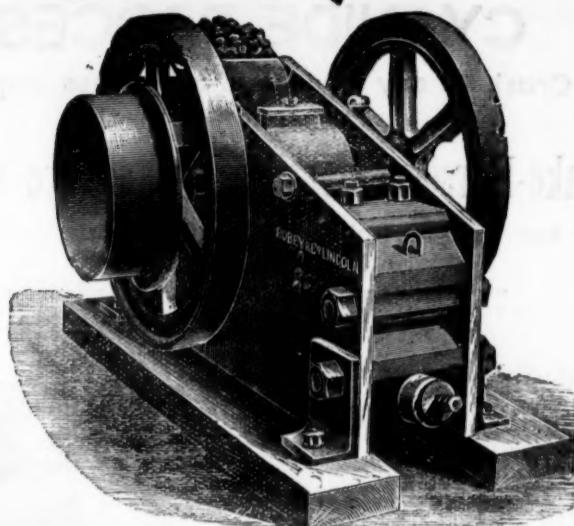
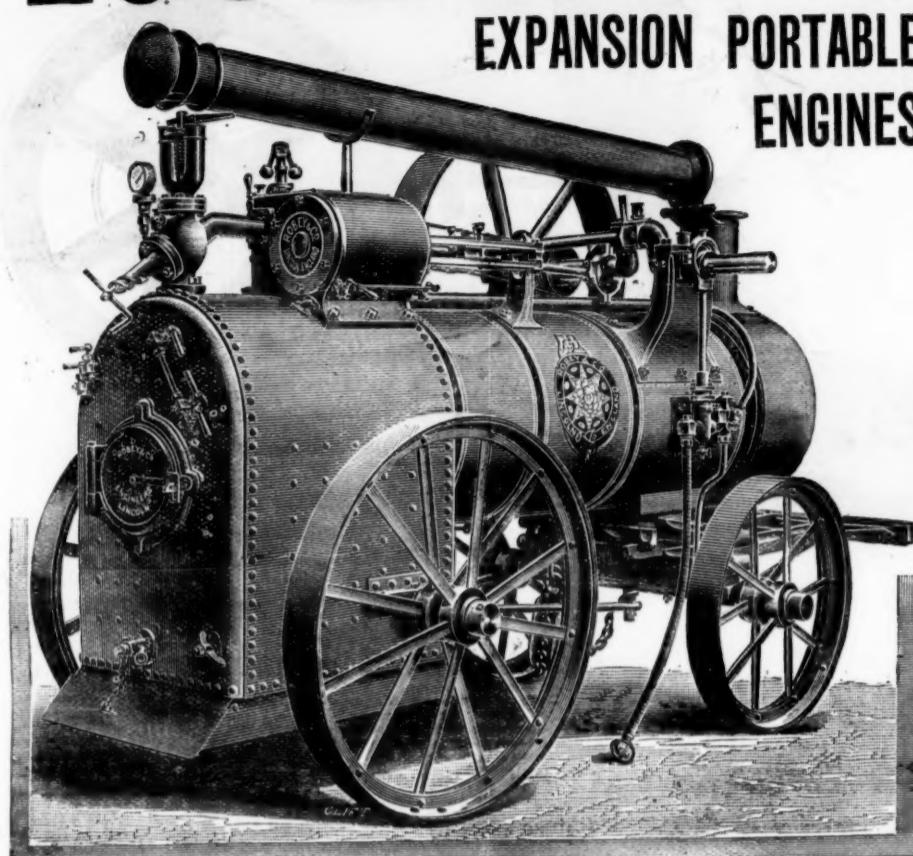
The COUNTY GENTLEMAN'S PAPER for Cheshire, Shropshire, and North Wales is THE CHESTER COURANT. (ESTABLISHED 1730.)

The CHESTER COURANT goes into all the best houses and has a Subscription List of remarkable scope and character. It is a most suitable medium for advertising Patent Machines used on large Farms or County Estates.

ROBEY & Co.,

LIMITED

EXPANSION PORTABLE ENGINES



IMPROVED STONE BREAKER AND ORE CRUSHER

For crushing Ores, Quartz, Road Metal, Railway Ballast, Cement, Phosphates, Coke, Coal, &c.

The above illustrates the most simple form of Stone Breaker made, and has no equal for easy transport over bad roads or mountainous countries. Steel has been largely employed, and in the place of the usual heavy Cast-Iron Frame a neat and much stronger Frame of rolled steel is used, with a saving of some tons in weight. The great depth of the sides gives it increased stiffness, and the materials of which the machine is constructed ensure great rigidity and thorough adaptability for heavy work.

The parts are few and simple, and thoroughly accessible for oiling, adjusting, and cleaning, and the liability to breakage is reduced to a minimum.

The jaws are easily renewed, and are made of our own special mixture and treatment, rendering the face well suited for quartz. These jaws can be adjusted while the machine is running so as to reduce the material to any desired size, and are adapted for either cubing or crushing.

GLOBE WORKS, LINCOLN.

SAFETY BLASTING IN COAL AND SHALE, ETC.

SETTLE'S ^{PATENT} GELATINE WATER-CARTRIDGE

NOBEL'S EXPLOSIVES COMPANY (Limited), Glasgow, having acquired from Mr. MILES SETTLE the Sole Patent Rights of his Water-Cartridge System of Blasting have now arranged to supply through their local Agents all the Appliances required in connection therewith.

ADVANTAGES OF USING SETTLE'S PATENT GELATINE WATER-CARTRIDGE:

1.—SAFETY IN BLASTING. 2.—NO SMOKE. 3.—NO SPARK OR FLAME. 4.—NO FUMES. 5.—ALL COAL GOTTEN IN LUMPY CONDITION AND WITH A MUCH SMALLER PERCENTAGE OF SLACK THAN IN BLASTING WITH POWDER. 6.—GREAT SAVING OF COST OWING TO MORE EFFICIENT BLASTING, AND TO REDUCTION OF MANUAL LABOUR. 7.—SIMPLICITY OF THIS METHOD OF BLASTING.

Trained Experts will carry out experiments, and instruct Colliery Managers, Miners, &c., FREE OF CHARGE, on application to Nobel's Explosives Company (Limited), Glasgow, or to their Consulting Engineer.

The use of the WATER-CARTRIDGE is recommended by the Royal Commission on Accidents in Mines.

For full information apply to NOBEL'S EXPLOSIVES COMPANY (LIMITED), GLASGOW, or to H. ENFIELD TAYLOR, M.Inst.C.E., the Company's Consulting Engineer, 15, Newgate Street, Chester.

MANUFACTURERS OF GELATINE-DYNAMITE, DYNAMITE, DETONATORS, ETC. ETC.

EASTON, ANDERSON, & GOOLDEN, Limited,

Telegrams: EGYPTIAN, LONDON.

Telephone: 3695.

3, WHITEHALL PLACE, LONDON, S.W. ERITH IRON WORKS, ERITH, KENT.
And JOHANNESBURG ... F. W. STOKER, Esq. AUSTRALIA ... Messrs. HARROLD BROS. TASMANIA ... SALISBURY FOUNDRY CO.

MANUFACTURERS OF

MINING MACHINERY of every description. ELECTRICAL, HAULING, and WINDING PLANTS.

ELECTRICAL PUMPING PLANTS. ELECTRICAL ROCK DRILLS.

Plants have recently been supplied to the following amongst other Mines:—
THE CHAMP D'OR DEEP LEVEL GOLD MINING COMPANY.
THE CASSEL COLLIERY COMPANY.
VILLAGE MAIN REEF GOLD MINING COMPANY.
THE GOLD FIELDS DEEP.
METROPOLITAN GOLD MINING COMPANY.
MEYER AND CHARLTON GOLD MINING COMPANY.
ROODEPOORT DEEP LEVEL GOLD MINE COMPANY.

MAY CONSOLIDATED GOLD MINING COMPANY.
GEORGE GOCH GOLD MINING COMPANY.
SALISBURY JUBILEE JOINT MILL.
MOODIES GOLD MINING EXPLORATION COMPANY (LIMITED).
WITWATERSRAND GOLD MINING COMPANY.
FERREIRA GOLD MINING COMPANY.
NIGEL GOLD MINE COMPANY.

SOLE MANUFACTURERS OF THE

NIAGARA CRUSHER, PULVERISER, & CONCENTRATOR.

The most Successful MACHINE in the WORLD. A 5-foot QUARTZ MACHINE will do more and better Work than five head of STAMPS. Costs half the Price. Uses half the Power. Repairs do not exceed 2½ per cent. per annum on first cost. Any Ore, however Refractory, is speedily reduced to a Uniform Power of any desired fineness, while the CONCENTRATOR SEPARATES THE VALUABLE ORE FROM THE MATRIX WITHOUT EXTRA POWER.

For full particulars of the NIAGARA PULVERISER, apply to the

NIAGARA PULVERISER SYNDICATE (LIMITED), 3, WHITEHALL PLACE, S.W.

MARSDEN'S PATENT DRY CRUSHER AND PULVERIZER.

Specially applicable for use in connection with the
CYANIDE PROCESS.

Will Crush to any Degree of Fineness required, and
in connection with the

Blake-Marsden Stonebreaker and Ore Crusher,
is far superior to Rolls, and is the most economical and
efficient Plant extant.

THE CHIEF ADVANTAGES OF THIS SYSTEM OF
REDUCTION CONSIST IN

Great Saving in first Cost
of Plant.

Avoidance of the
FORMATION of SLIMES.

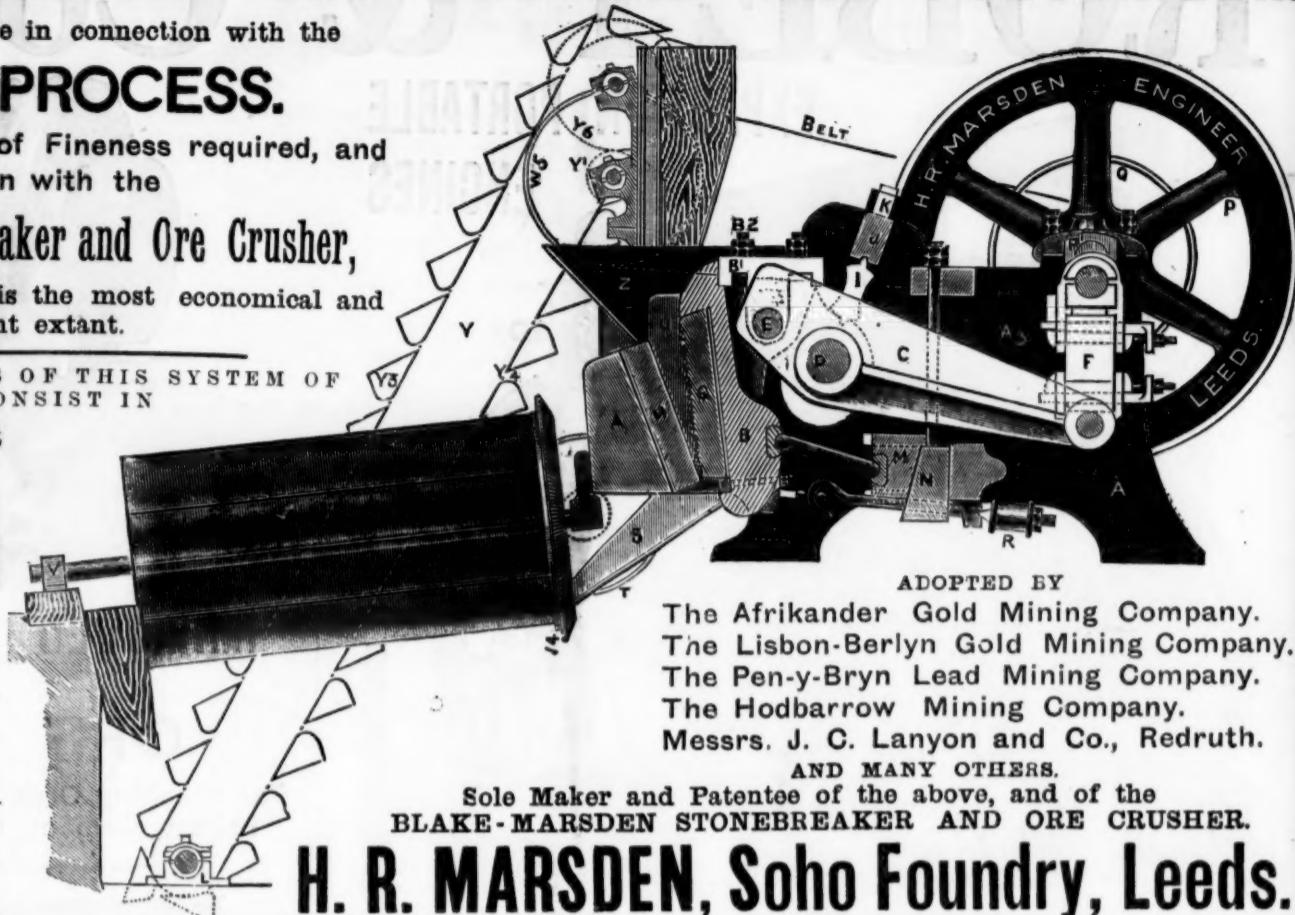
SMALL COST OF
MAINTENANCE.

SMALL POWER
REQUIRED TO DRIVE.

SIMPLICITY
OF CONSTRUCTION.

Can be seen in Operation by appointment at the Works,

SOHO FOUNDRY LEEDS.



ADOPTED BY

The Afrikander Gold Mining Company.
The Lisbon-Berlyn Gold Mining Company.
The Pen-y-Bryn Lead Mining Company.
The Hodbarrow Mining Company.
Messrs. J. C. Lanyon and Co., Redruth.
AND MANY OTHERS.

Sole Maker and Patentee of the above, and of the
BLAKE-MARSDEN STONEBREAKER AND ORE CRUSHER.

H. R. MARSDEN, Soho Foundry, Leeds.

From His Grace the Duke of
Rutland.

Belvoir, Grantham,

December 1st, 1879.

SIRs.—Elliman's Royal Embrocation is used in my stables; think it very useful.

RUTLAND.

Master of the Belvoir
Hounds.

—

From the Earl of Harrington
January 9th, 1889.

SIRs.—Elliman's Royal Embrocation is used in my stables, and I consider it the best that I can obtain. HARRINGTON.

Master of the South Wilts
Hounds.

—

From Major M. J. Balfe,
South Park.
June 16th, 1892.

SIRs.—Elliman's Royal Embrocation is used in my stables, and I can highly recommend it.

M. J. BALE.

Master of the Roscommon
County Staghounds.

ELLIMAN'S ROYAL EMBROCATION



From Lord Haddington, Tyn-
ningham, Prestonkirk, N.B.
December 27th, 1885.

SIRs.—Elliman's Royal Embrocation is used in my stables, and I consider it indispensable in any stable, but especially in the stable of a Master of Hounds.

HADDINGTON.

Master of the Berwickshire
Hounds.

—

From R. Burdon Sanderson,
Esq., Warren House, Belford
July 10th, 1892.

SIRs.—Elliman's Royal Embrocation is used in my stables and I consider it very useful.

R. BURDON SANDERSON.
Master of Percy Foxhounds.

From Wm. J. Buckley, Esq.,
Penyfael, Llanelli.
July 16th, 1892.

DEAR SIRs.—I have much pleasure in recommending your Royal Embrocation. I always keep a stock in my stables and kennels. My farm bailiff has also found it of much value among my herd.

WM. J. BUCKLEY.
Master of Carmarthenshire
Foxhounds.

CHARLES HANSELL & CO.,

CANAL AND MONTGOMERY STEEL WORKS, CADMAN ST., SUSSEX ST., SHEFFIELD.



FONTAINE CO.,
PERFORATING WORKS, AIX-LA-CHAPELLE, GERMANY.

ESTABLISHED 1857.

PERFORATED PLATES FOR
Sieving and Sorting pur-
poses, round, square, and
taper holes.

Preparation and Cleaning of
Grain.

Drying Hops, Tobacco,
Chicory, Bones, Manures.

Breweries, Chemical
Works, Cement Works, Corn
Mills, &c.

Specialities for Sugar Manu-
factories Refineries

Copper Sheets perforated
with our elongated Conical
Holes. Filter Plates, &c.



We produce our Perforated Sheets
by very powerful machinery, per-
forating at one stroke the whole
breadth of the sheet; we can, there-
fore, supply irreproachable Ware
at very Low Prices. We also sup-
ply all Machinery and Tools of
every description for Perforating
Works.

**BRUNTON and PEARSE'S PATENT
POCKET MINE TRANSIT.**

In Aluminium and Silver. Price £5 post
free to any part of the United Kingdom
or the Colonies.

For circ'ar and particulars apply to

ARTHUR L. PEARSE,

7, ST. MILDRED'S COURT, POULTRY, LONDON

DELTA METAL
FOR ALL ENGINEERING WORK.
STRONGER AND MORE DURABLE THAN STEEL.
Specially Adapted for MINING WORK
on account of its very high Resistance to Corrosion.

DELTA

CAST, FORGED, STAMPED, ROLLED, DRAWN.
For full Particulars and Prices apply to
THE DELTA METAL COMPANY (Ltd.)
110, Cannon Street, London, E.C.
Telegrams:—"DELTA," London. Telephone No. 11292.

TELEGRAMS: TUCKS LONDON.

TUCKS

INDIARUBBER, LEATHER, AND ASBESTOS GOODS.

WRITE FOR
SAMPLES &
PRICES

GENUINE PACKING

IS ONLY MANUFACTURED BY

TUCK AND CO., LIMITED,

116, CANNON STREET, LONDON;

And at LIVERPOOL, CARDIFF, NEWPORT, BARRY,
SOUTHAMPTON, DUBLIN & MELBOURNE.

EDITORIAL AND ADVERTISEMENT OFFICES:—18, FINCH LANE, E.C.
Printed for the Registered Proprietors by JOHN ROBERT GALE, at their Printing Office, 3, DORSET BUILDINGS, SALISBURY SQUARE, in the Parish of St. Bride's, in the City of London.—July 15, 1896.